

HHJ8PL

8" Architectural Horizontal CFL Retrofit Downlight

Architectural

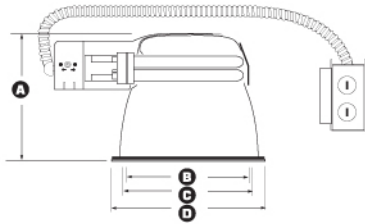
Catalog Number:

Project Name:

Type:

Note:

MAXILUME
ARCHITECTURAL LIGHTING



- A. Min. Height = 6-1/8"
- B. Trim Aperture = 8"
- C. Cut-out = 8-3/8"
- D. Trim Outside Diameter = 9"



DESCRIPTION

Designed to install into an existing downlights mounting frame and convert them into energy efficient CFL downlights. Fits all downlights with 8-1/2" aperture.

1. LAMP HOLDER - Aluminum lamp holder effectively provides heat dissipation and ventilation. Unitized optics guarantees proper trim to housing installation. Tool-less installation adjustability from either outside the housing or inside the housing.

2. JUNCTION BOX/BALLAST - UL listed for through-branch circuit wiring and has four 1/2" KO's, one 3/4" KO and four Romex knockouts with pry-out slots and strain clamps. Ballast and Junction Box are accessible from below, no tools required. Ballast supplied is manufactured by Philips Advance, Universal Technologies or Lutron Electronics.

OPTICS

3. REFLECTOR - Self-flanged .050" aluminum reflector with low iridescent finish. Reflector provides 45-degree lamp-to-reflector image cutoff.

4. GROOVE BAFFLE - Self-flanged one-piece aluminum with concentric rings.

5. LENS - Choice of either tempered clear, tempered prismatic or tempered frosted lens fastened with two torsion springs for easy re-lamping. UL listed for wet or damp location.

LISTING

UL listed for through-branch circuit wiring and damp locations. Wet location only with lens trims.

LAMP BASE GUIDE (Sockets will accept all designated lamp bases listed.)						
13W	18W	26W	32W	42W	57W	70W
G24q-1 GX24q-1	G24q-2 GX24q-2	G24q-3 GX24q-3 GX24q-4	GX24q-3 GX24q-4	GX24q-4	GX24q-5	GX24q-6

HHJ8PL - ITEM SELECTOR: (Please check the boxes below for the option desired)

WATTAGE	BALLAST	VOLTAGE	EMERGENCY OPTIONS	TRIM TYPE & DESCRIPTION	REFLECTOR	BAFFLE	GLASS
1 LAMP <input type="checkbox"/> 1X9 <input type="checkbox"/> 1X13 <input type="checkbox"/> 1X18 <input type="checkbox"/> 1X26 <input type="checkbox"/> 1X32 <input type="checkbox"/> 1X42 2 LAMPS <input type="checkbox"/> 2X9 <input type="checkbox"/> 2X13 <input type="checkbox"/> 2X18 <input type="checkbox"/> 2X26 <input type="checkbox"/> 2X32 <input type="checkbox"/> 2X42	<input type="checkbox"/> (E) Electronic <input type="checkbox"/> (M) Magnetic ¹ <input type="checkbox"/> (S) Energy Star ² DIMMING <input type="checkbox"/> Mark 7 ³ <input type="checkbox"/> Mark 10 ⁴ <input type="checkbox"/> Lut-E (EC3D) ⁵	<input type="checkbox"/> MVOLT (120/277) <input type="checkbox"/> 120 <input type="checkbox"/> 277 <input type="checkbox"/> 347	<input type="checkbox"/> EMG 750 (750 Lumens) ⁶ <input type="checkbox"/> EMG 1300 (1300 Lumens) ⁶ OTHER OPTIONS <input type="checkbox"/> FUSE ¹¹ <input type="checkbox"/> RIF ¹²	<input type="checkbox"/> 8501 <input type="checkbox"/> 8516 <input type="checkbox"/> 8526 <input type="checkbox"/> 8502 <input type="checkbox"/> 8517 <input type="checkbox"/> 8527 <input type="checkbox"/> 8503 <input type="checkbox"/> 8518 <input type="checkbox"/> 8504 <input type="checkbox"/> 8519 <input type="checkbox"/> 8505 <input type="checkbox"/> 8509 <input type="checkbox"/> 8506 <input type="checkbox"/> 8510 <input type="checkbox"/> 8507 <input type="checkbox"/> 8511 <input type="checkbox"/> 8508 <input type="checkbox"/> 8521 <input type="checkbox"/> 8512 <input type="checkbox"/> 8522 <input type="checkbox"/> 8513 <input type="checkbox"/> 8523 <input type="checkbox"/> 8514 <input type="checkbox"/> 8524 <input type="checkbox"/> 8515 <input type="checkbox"/> 8525	<input type="checkbox"/> CL <input type="checkbox"/> SCH ^{**} <input type="checkbox"/> SHZ ^{**} <input type="checkbox"/> WT <input type="checkbox"/> W <input type="checkbox"/> MB	<input type="checkbox"/> WH <input type="checkbox"/> P	<input type="checkbox"/> Blue <input type="checkbox"/> Green <input type="checkbox"/> Red <input type="checkbox"/> Frost

¹ - (M) Magnetic = Available on 9W, 13W, 18W & 26W fixtures only • ² - (S) Energy Star = Available on selected fixtures only, please see list above • ³ - MARK 7 = Must specify voltage • ⁴ - MARK 10 = Not available on 13W, 57W, 70W, must specify voltage • ⁵ - LUT-E (EC3D) = Not available on 13W, 57W, 70W, must specify voltage • ⁶ - EMG = Emergency battery pack w/ remote test switch • ⁷ - INTG = Emergency battery pack w/ integral (reflector) test switch • ⁸ - EMG-D = Emergency battery pack w/ remote test switch for damp location • ⁹ - INTG-D = Emergency battery pack w/ integral(reflector) test switch for damp location • ¹⁰ - ICE = Emergency battery pack w/ remote test switch operating between -18°C and 55°C • ¹¹ - FUSE = Single slow-blow fuse • ¹² - RIF = Radio interference filter

Specifications:

HHJ8PL



Sample of Catalog Number: HHJ8PL-1X26-E-MVOLT-EMG750-8501-CL-WH

REFLECTOR	BAFFLE	RING
CL Clear	WH White	WH Self-Flange White
SHZ Satin Haze (Low Iridescent)	P Black	Standard on all trims
WT Wheat		SCH** Self-Flange Chrome
MB Black		** Only available on XX01 CL
W White		SHZ* Satin Haze
		* Provided w/ satin haze ring only

*For custom baffle, reflector, trim ring, glass color and lens options, please consult factory.



A division of
Elite Lighting

Submittal form is available @ www.maxilume.com
Tel: 323-888-1973 • Fax: 323-888-1977

Specifications and Dimensions subject to change without notice.

8" Horizontal CFL Optics

Catalog Number:

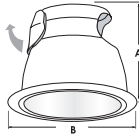
Project Name:

Type:

Note:

MAXILUME
ARCHITECTURAL LIGHTING

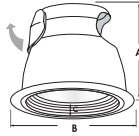
8501-CL Reflector



REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH, SCH, SHZ

A= 6-1/4" • B= 9-1/8"

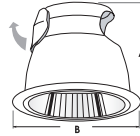
8502-WH-CL Baffle with Reflector



BAFFLE FINISH:
WH, P
REFLECTOR FINISH:
CL

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

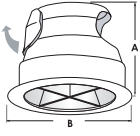
8507-SHZ Wall Wash Reflector



REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH, SCH, SHZ

A= 6-1/4" • B= 9-1/8"

8508-CL Crossblade Reflector



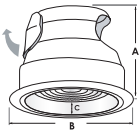
REFLECTOR FINISH:
CL, WT, MB, SHZ
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8"

8503-CL Reflector with Fresnel Glass Lens



FOR WET LOCATION



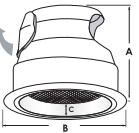
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8504-CL Reflector with Prismatic Glass Lens



FOR WET LOCATION



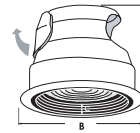
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8505-P Baffle with Fresnel Glass Lens



FOR WET LOCATION



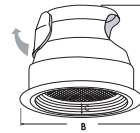
BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8506-WH Baffle with Prismatic Glass Lens



FOR WET LOCATION



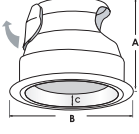
BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8514-CL Reflector with Frosted Glass Lens



FOR WET LOCATION



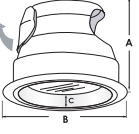
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH, SCH, SHZ

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8515-WT Reflector with Tempered Clear Glass



FOR WET LOCATION



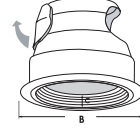
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH, SCH, SHZ

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8512-WH Baffle with Frosted Glass Lens



FOR WET LOCATION



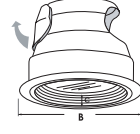
BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8513-WH Baffle with Tempered Clear Glass



FOR WET LOCATION



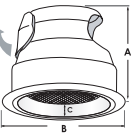
BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8516-CL Reflector with Prismatic Plastic Lens



FOR WET LOCATION



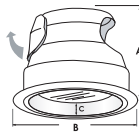
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8518-WT Reflector with Tempered Clear Plastic



FOR WET LOCATION



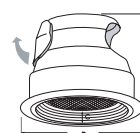
REFLECTOR FINISH:
CL, WT, MB, SHZ, W
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8517-WH Baffle with Prismatic Plastic Lens



FOR WET LOCATION



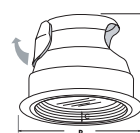
BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8519-WH Baffle with Tempered Clear Plastic



FOR WET LOCATION



BAFFLE FINISH:
WH, P
RING FINISH:
WH

A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

8" Horizontal CFL Optics

Catalog Number:

Project Name:

Type:

Note:

MAXILUME
ARCHITECTURAL LIGHTING

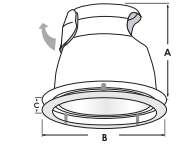
8509-CL
Deco Glass Reflector



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ

GLASS FINISH:
BLUE, GREEN, RED, FROST



A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8510-CL
Double Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ

GLASS FINISH:
BLUE, GREEN, RED, FROST



A= 6-1/4" • B= 9-1/8" • C= 1-3/4"

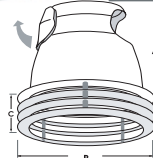
8511-CL
Triple Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

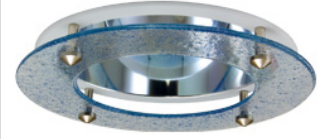
RING FINISH:
WH, SCH, SHZ

GLASS FINISH:
BLUE, GREEN, RED, FROST



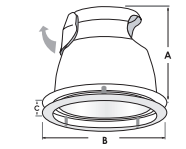
A= 6-1/4" • B= 9-1/8" • C= 2-1/4"

8521-CL
Stardust Deco Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



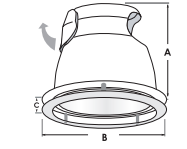
A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8522-CL
Euro Deco Ring Glass



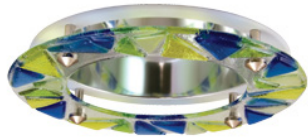
REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



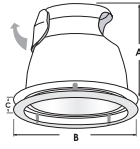
A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8523-CL
Prism Deco Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8524-CL
Geo Deco Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



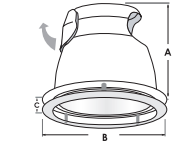
A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8525-CL
Central Etched Float Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



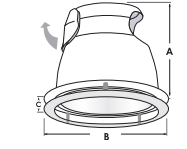
A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8526-CL
Diffusing Screen Wall Wash



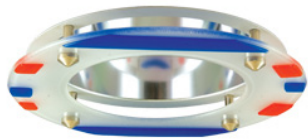
REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



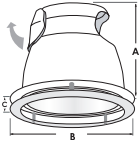
A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

8527-CL
Geo Deco Ring Glass



REFLECTOR FINISH:
CL, WT, MB, SHZ, W

RING FINISH:
WH, SCH, SHZ



A= 6-1/4" • B= 9-1/8" • C= 1-1/4"

REFLECTOR	BAFFLE	RING
CL Clear	WH White	WH Self-Flange White
SHZ Satin Haze (Low Iridescent)	P Black	Standard on all trims
WT Wheat	GLASS	SCH** Self-Flange Chrome
MB Black	Only available on XX09, XX10 and XX11 series.	** Only available on XX01 CL
W White		SHZ* Satin Haze
		* Provided w/ satin haze ring only

*For custom baffle, reflector, trim ring, glass color and lens options, please consult factory.

PHOTOMETRIC DATA | CFL | 8" HORIZONTAL DOWNLIGHT



HH8PL-1X26-E-8501CL / HHR8PL-1X26-E-8501CL / HHJ8PL-1X26-E-8501CL / CH8PL-1X26-E-8501CL

TEST NO.: LLI 0509-15V-P

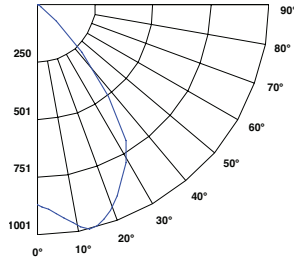
LAMP: GE F26TBX/841/A/ECO

LUMENS: 1710

TOTAL LUMINAIRE EFFICIENCY: 75%

SPACING CRITERIA: 1.14

Candle Power Distribution (Candelas)



Beam Angle: 110°		
4'	54.6	7.9'
6'	24.5	11.9'
8'	13.6	15.8'
10'	8.7	19.8'
12'	6.1	23.7'
Distance to Plane	Initial Nadir Footcandles	Beam Spread

BEAM DIA. MEASURED AT 10% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-30°	690.28	40.4	53.8
0-40°	1037.93	60.7	81
0-60°	1266.15	74	98.8
0-90°	1281.89	75	100
90-120°	0	0	0
90-130°	0	0	0
90-150°	0	0	0
90-180°	0	0	0
0-180°	1281.89	75	100

Total Luminaire Efficiency =

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20% = PF

RC	RW	80%				70%				50%				30%				10%				0%			
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	0%	0%	0%
0	89	89	89	89	87	87	87	87	83	83	83	80	80	80	77	77	77	75	75	75	73	72	71	70	69
1	84	82	80	78	83	80	79	77	77	76	75	75	73	72	72	71	70	69	68	67	66	66	64	63	63
2	80	75	72	69	78	74	71	68	72	69	67	69	67	65	67	66	64	63	63	62	62	61	60	59	57
3	75	69	65	62	73	68	64	61	66	63	60	64	62	59	63	60	58	57	57	56	56	55	54	53	52
4	70	64	59	55	69	63	59	55	61	57	54	60	56	54	58	55	53	52	52	51	51	50	49	47	46
5	66	59	54	50	65	58	53	50	57	53	49	55	52	49	54	51	49	47	47	46	46	45	44	43	42
6	62	54	49	46	61	54	49	45	53	48	45	51	48	45	50	47	44	43	43	42	42	41	40	39	38
7	58	50	45	42	57	50	45	42	49	44	41	48	44	41	47	43	41	40	40	39	39	38	37	36	35
8	55	47	42	38	54	46	41	38	45	41	38	45	41	38	44	40	38	36	36	35	35	34	33	32	31
9	52	44	39	35	51	43	38	35	42	38	35	42	38	35	41	37	35	34	34	33	33	32	31	30	29
10	49	41	36	32	48	40	36	32	40	35	32	39	35	32	38	35	32	31	31	30	30	29	28	27	26

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	8411	6794	7096
55°	904	691	691
65°	361	361	361
75°	354	354	354
85°	700	700	700

Zonal Lumen Summary

Zone	Lumens
0-10	69.12
10-20	256.21
20-30	364.95
30-40	347.65
40-50	199.82
50-60	28.4
60-70	8.48
70-80	4.02
80-90	3.24

Candela Tabulation

	0	45	90
0	873	873	873
1	882	879	876
3	892	885	877
5	911	894	878
7	936	905	878
9	962	911	881
11	986	909	888
13	1001	903	897
15	998	895	901
17	975	883	898
19.5	948	864	897
22.5	902	841	906
25.5	843	824	899
29	790	794	864
33	706	693	766
37.5	502	485	550
42.5	280	246	262
47.5	110	69	67
55	17	13	13
65	5	5	5
75	3	3	3
85	2	2	2
90	0	0	0

HH8PL-1X32-E-8501CL / HHR8PL-1X32-E-8501CL / HHJ8PL-1X32-E-8501CL / CH8PL-1X32-E-8501CL

TEST NO.: LLI 0509-15V

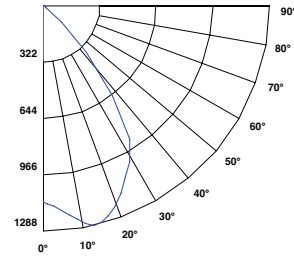
LAMP: GE F32TBX/841/A/ECO

LUMENS: 2200

TOTAL LUMINAIRE EFFICIENCY: 75%

SPACING CRITERIA: 1.14

Candle Power Distribution (Candelas)



Beam Angle: 89°		
4'	70.2	7.9'
6'	31.2	11.9'
8'	17.6	15.8'
10'	11.2	19.8'
12'	7.8	23.7'
Distance to Plane	Initial Nadir Footcandles	Beam Spread

BEAM DIA. MEASURED AT 10% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-30°	888.06	40.4	53.8
0-40°	1335.36	60.7	81
0-60°	1628.96	74	98.8
0-90°	1649.42	75	100
90-120°	0	0	0
90-130°	0	0	0
90-150°	0	0	0
90-180°	0	0	0
0-180°	1649.42	75	100

Total Luminaire Efficiency = 75%

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20% = PF

RC	RW	80%				70%				50%				30%				10%				0%			
		70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	0%	0%	0%
0	89	89	89	89	87	87	87	87	83	83	83	80	80	80	77	77	77	75	75	75	73	72	71	70	69
1	84	82	80	78	83	80	79	77	77	76	75	75	73	72	72	71	70	69	68	67	66	66	64	63	63
2	80	75	72	69	78	74	71	68	72	69	67	69	67	65	67	66	64	63	63	62	62	61	60	59	57
3	75	69	65	62	73	68	64	61	66	63	60	64	62	59	63	60	58	57	57	56	56	55	54	53	52
4	70	64	59	55	69	63	59	55	61	57	54	60	56	54	58	55	53	52	52	51	51	50	49	47	46
5	66	59	54	50	65	58	53	50	57	53	49	55	52	49	54	51	49	47	47	46	46	45	44	43	42
6	62	54	49	46	61	54	49	45	53	48	45	51	48	45	50	47	44	43	43	42	42	41	40	39	38
7	58	50	45	42	57	50	45	42	49	44	41	48	44	41	47	43	41	40	40	39	39	38	37	36	35
8	55	47	42	38	54	46	41	38	45	41	38	45	41	38	44	40	38	36	36	35	35	34	33	32	31
9	52	44	39	35	51	43	38	35	42	38	35	42	38	35	41	37	35	34	34	33	33	32	31	30	29
10	49	41	36	32	48	40	36	32	40	35	32	39	35	32	38	35	32	31	31	30	30	29	28	27	26

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	10806	8757	9123
55°	1170	904	904
65°	433	433	433
75°	471	471	471
85°	1050	1050	1050

Zonal Lumen Summary

Zone	Lumens
0-10	88.93
10-20	329.61
20-30	469.52
30-40	447.3
40-50	257.07
50-60	36.54
60-70	10.82
70-80	5.05
80-90	4.6

Candela Tabulation

	0	45	90
0	1123	1123	1123
1	1135	1131	1127
3	1147	1139	1128
5	1172	1150	1129
7	1204	1164	1130
9	1238	1172	1134
11	1269	1169	1142
13	1288	1162	1154
15	1284	1151	1159
17	1255	1136	1155
19.5	1220	1111	1154
22.5	1160	1082	1166
25.5	1084	1060	1156
29	1017	1022	1111
33	908	891	986
37.5	646	624	707
42.5	360	317	337
47.5	141	89	86
55	22	17	17
65	6	6	6
75	4	4	4
85	3	3	3
90	0	0	0

HH8PL-2X26-E-8501CL / HHR8PL-2X26-E-8501CL / HHJ8PL-2X26-E-8501CL / CH8PL-2X26-E-8501CL

TEST NO.: LLI 0509-15Y

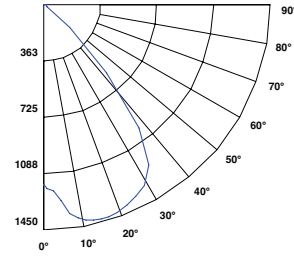
LAMP: GE F26TBX/841/A/ECO

LUMENS: 1710

TOTAL LUMINAIRE EFFICIENCY: 64.2%

SPACING CRITERIA: 1.26

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-30°	1078.33	31.5	49.1
0-40°	1662.5	48.6	75.8
0-60°	2163.49	63.3	98.6
0-90°	2194.11	64.2	100
90-120°	0	0	0
90-130°	0	0	0
90-150°	0	0	0
90-180°	0	0	0
0-180°	2194.11	64.2	100

Total Luminaire Efficiency = 64.2%

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	14429	18376	17664
55°	2127	1649	1436
65°	577	650	650
75°	589	589	589
85°	1400	1400	1400

Zonal Lumen Summary

Zone	Lumens
0-10	99.92
10-20	400.48
20-30	577.92
30-40	584.18
40-50	420.43
50-60	80.56
60-70	17.73
70-80	6.95
80-90	5.95

Candela Tabulation

0	45	90	
0	1156	1156	1156
1	1171	1182	1188
3	1160	1195	1202
5	1237	1258	1267
7	1296	1352	1357
9	1340	1392	1394
11	1377	1414	1415
13	1398	1432	1430
15	1401	1444	1441
17	1387	1447	1444
19.5	1344	1433	1435
22.5	1276	1403	1395
25.5	1256	1371	1359
29	1237	1331	1314
33	1121	1241	1225
37.5	857	1003	1000
42.5	494	606	599
47.5	175	246	220
55	40	31	27
65	8	9	9
75	5	5	5
85	4	4	4
90	0	0	0

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20% = PF

RC	80%				70%				50%				0%				
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
0	76	76	76	76	75	75	75	75	71	71	71	68	68	68	65	65	64
1	72	70	68	67	71	69	67	65	66	65	63	64	63	62	61	61	60
2	68	64	61	58	66	63	60	58	61	58	56	59	57	55	57	55	54
3	63	59	55	52	62	58	54	51	56	53	51	54	52	50	53	51	49
4	59	54	49	46	58	53	49	46	51	48	45	50	47	45	49	46	44
5	56	49	45	42	54	49	44	41	47	44	41	46	43	41	45	42	40
6	52	45	41	38	51	45	41	37	44	40	37	43	39	37	42	39	37
7	49	42	37	34	48	41	37	34	40	37	34	40	36	34	39	36	33
8	46	39	34	31	45	38	34	31	38	34	31	37	33	31	36	33	31
9	43	36	31	28	42	36	31	28	35	31	28	34	31	28	34	30	28
10	41	33	29	26	40	33	29	26	33	29	26	32	28	26	31	28	25

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

Beam Angle: 101°

Distance to Plane	Initial Nadir Footcandles	Beam Spread
4'	72.5	9.6'
6'	32.1	14.4'
8'	18.1	19.3'
10'	11.6	24.1'
12'	8.0	28.9'

BEAM DIA. MEASURED AT 10% OF NADIR F.C.

HH8PL-2X32-E-8501CL / HHR8PL-2X32-E-8501CL / HHJ8PL-2X32-E-8501CL / CH8PL-2X32-E-8501CL

TEST NO.: LLI 0509-15Y

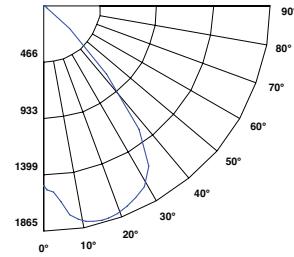
LAMP: GE F32TBX/841/A/ECO

LUMENS: 2200

TOTAL LUMINAIRE EFFICIENCY: 64.2%

SPACING CRITERIA: 1.26

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-30°	1387.31	31.5	49.1
0-40°	2138.86	48.6	75.8
0-60°	2783.43	63.3	98.6
0-90°	2822.87	64.2	100
90-120°	0	0	0
90-130°	0	0	0
90-150°	0	0	0
90-180°	0	0	0
0-180°	2822.87	64.2	100

Total Luminaire Efficiency = 64.2%

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	18548	23660	22711
55°	2712	2127	1861
65°	722	794	794
75°	825	825	825
85°	1750	1750	1750

Zonal Lumen Summary

Zone	Lumens
0-10	128.56
10-20	515.24
20-30	743.51
30-40	751.54
40-50	540.9
50-60	103.68
60-70	22.59
70-80	9.01
80-90	7.84

Candela Tabulation

0	45	90	
0	1487	1487	1487
1	1507	1521	1529
3	1493	1537	1547
5	1591	1619	1630
7	1667	1740	1746
9	1724	1791	1794
11	1772	1819	1821
13	1799	1842	1840
15	1802	1858	1854
17	1784	1862	1858
19.5	1729	1843	1846
22.5	1642	1805	1795
25.5	1617	1764	1748
29	1591	1713	1691
33	1442	1596	1576
37.5	1103	1290	1286
42.5	635	780	770
47.5	225	317	283
55	51	40	35
65	10	11	11
75	7	7	7
85	5	5	5
90	0	0	0

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20% = PF

RC	80%				70%				50%				0%				
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
0	76	76	76	76	75	75	75	75	71	71	71	68	68	68	65	65	64
1	72	70	68	67	71	69	67	65	66	65	63	64	63	62	61	61	60
2	68	64	61	58	66	63	60	58	61	58	56	59	57	55	57	55	54
3	63	59	55	52	62	58	54	51	56	53	51	54	52	50	53	51	49
4	59	54	49	46	58	53	49	46	51	48	45	50	47	45	49	46	44
5	56	49	45	42	54	49	44	41	47	44	41	46	43	41	45	42	40
6	52	45	41	38	51	45	41	37	44	40	37	43	39	37	42	39	37
7	49	42	37	34	48	41	37	34	40	37	34	40	36	34	39	36	33
8	46	39	34	31	45	38	34	31	38	34	31	37	33	31	36	33	31
9	43	36	31	28	42	36	31	28	35	31	28	34	31	28	34	30	28
10	41	33	29	26	40	33	29	26	33	29	26	32	28	26	31	28	25

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

Beam Angle: 101°

Distance to Plane	Initial Nadir Footcandles	Beam Spread
4'	93	9.6'
6'	41.3	14.4'
8'	23.2	19.3'
10'	14.9	24.1'
12'	10.3	28.9'

BEAM DIA. MEASURED AT 10% OF NADIR F.C.

HH8PL-2X42-E-8501CL / HHR8PL-2X42-E-8501CL / HHJ8PL-2X42-E-8501CL / CH8PL-2X42-E-8501CL

TEST NO.: LLI 0509-15Y-P

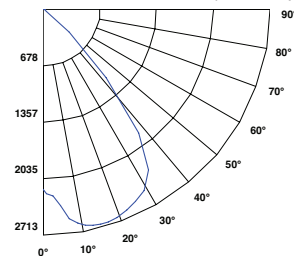
LAMP: GE F42TBX/841/A/ECO

LUMENS: 3200

TOTAL LUMINAIRE EFFICIENCY: 64.2%

SPACING CRITERIA: 1.26

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-30°	2017.87	31.5	49.1
0-40°	3111.03	48.6	75.8
0-60°	4048.63	63.3	98.6
0-90°	4105.74	64.2	100
90-120°	0	0	0
90-130°	0	0	0
90-150°	0	0	0
90-180°	0	0	0
0-180°	4105.74	64.2	100

Total Luminaire Efficiency = 64.2%

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	26982	34422	33042
55°	3935	3084	2712
65°	1083	1155	1155
75°	1178	1178	1178
85°	2450	2450	2450

Zonal Lumen Summary

Zone	Lumens
0-10	187
10-20	749.43
20-30	1081.44
30-40	1093.16
40-50	786.79
50-60	150.81
60-70	32.9
70-80	13.12
80-90	11.08

Candela Tabulation

0	45	90	
0	2163	2163	2163
1	2192	2212	2224
3	2172	2236	2250
5	2314	2355	2371
7	2425	2531	2540
9	2508	2605	2609
11	2577	2646	2649
13	2617	2679	2676
15	2621	2703	2697
17	2595	2708	2703
19.5	2515	2681	2685
22.5	2388	2625	2611
25.5	2352	2566	2543
29	2314	2492	2460
33	2097	2321	2292
37.5	1604	1876	1871
42.5	924	1135	1120
47.5	327	461	412
55	74	58	51
65	15	16	16
75	10	10	10
85	7	7	7
90	0	0	0