

PROJECT

DATE

COMMENTS



IN STOCK



ENERGY CHART

OUTPUT	WATTAGE field selectable	DELIVERED LUMENS	EFFICACY lm/w
FS1	18	1440	80
	27	2160	80
	40	3200	80
FS2	55	4400	80
	65	5200	80
	80	6400	80

ORDERING LOGIC

EX: CDR-6-FS1-FS-UNV

FAMILY	SIZE	OUTPUT	CCT	VOLTAGE
CDR				UNV
6 6"	FS1	Field Selectable 18W / 27W / 40W	FS ¹ Field Selectable ¹ 3000K / 3500K / 4000K	UNV 100-277V
8 8"	FS2	Field Selectable 55W / 65W / 80W	35 ² 3500K	
10 10"			40 ² 4000K	

ORDERING NOTES

- 1 Available with FS1 output option only.
- 2 Available with FS2 output option only.

CDR COMMERCIAL DOWNLIGHT DEEP REGRESS LED

The CDR series is a COB recessed downlight offering multiple wattage, beam angle, and reflector color options.

- Residential
- Commercial
- Hospitality

PHYSICAL

Housing Material	Aluminum
Mounting	Recessed
Trim Finish	White

PERFORMANCE

Warranty	5 years
Certifications	CUL, UL, Energy Star
Rated Life	>50,000 hours
CCT	Single CCT, Field Selectable 3CCT: 3000K, 3500K, 4000K, 5000K
CRI	80+

ELECTRICAL

Wattage	Field Selectable: 18/27/40W, 55/65/80W
Voltage	100-277V
Power Factor	>0.9
Dimmable	1-10V

SEE NEXT PAGE FOR ACCESSORIES ORDERING LOGIC



ACCESSORIES ORDERING LOGIC (ORDER SEPARATELY)

EX: CDR-6H

FAMILY	ACCESSORIES
CDR	
6H	6" New Construction Housing
8H	8" New Construction Housing
10H	10" New Construction Housing
EM	120-277V Emergency LED Driver: 120 Minutes

SPECIFICATIONS
STRUCTURE

Spun aluminum reflector integrated with haze finish and white trim ring with shadow free, deeply regressed diffusing lens conceals the LEDs from direct view.

ELECTRICAL

Class 2 high efficiency LED driver, 1-10V with continuous dimming to 10%.

Confirmed compatibility with (but not limited to) the following dimmers:

- Leviton IP710-DL
- Leviton IP710-LF
- Lutron PowPak 0-10V Dimming Module
- Lutron Diva-Dvtv
- Hubbell NX Distributed Room Controller
- Cooper Greengate Room Controller
- nLight nPP16D
- Wattstopper DLM

OPTIONAL FUNCTION

Optional low voltage 100-277V emergency LED driver for lighting up to 120 minutes in event of power failure, that meets critical life-safety lighting requirements.

LED SYSTEM

CRI: Minimum 80 color rendering index

CCT: 3000K, 3500K, and 4000K with a great color consistency

LED: Life Minimum 50,000h with 87.8% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

Thermal Management: Aluminum housing acting as the heat sink to maximize life.

MOUNTING

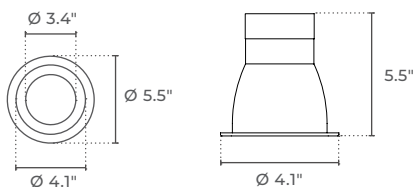
It is provided with spring steel friction clips allowing for installation in a variety of commercial recessed open frame rough-in sections.

APPROVALS

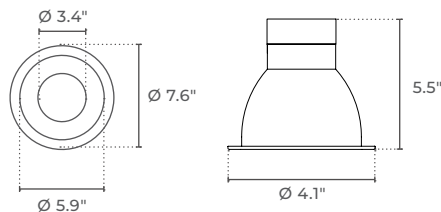
- cULus listed for damp locations
- Energy Star Listed
- Tested to IESNA LM-79 and LM-80

WARRANTY

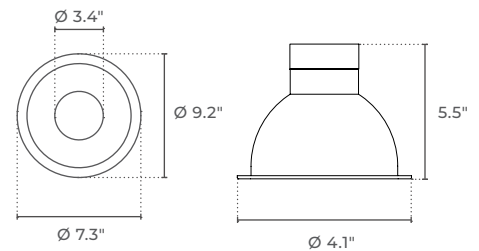
5-year limited warranty on LED and driver.

DIMENSIONS
6"


Mounting Diameters: 6"-6.7"

8"


Mounting Diameters: 7.7"-8.4"

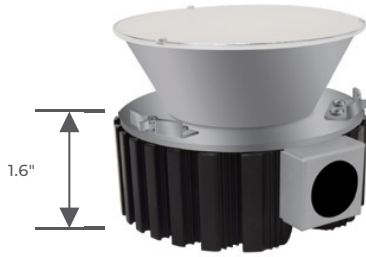
10"


Mounting Diameters: 10"-10.7"



ENGINE DIMENSIONS

FS1

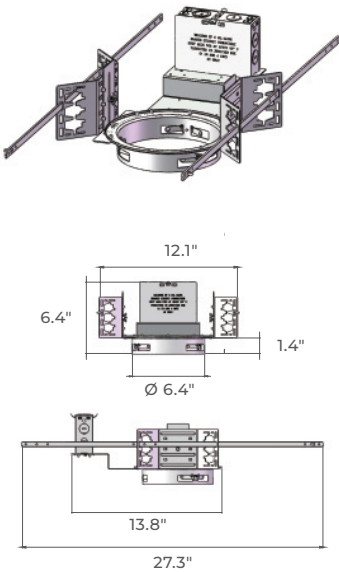


FS2

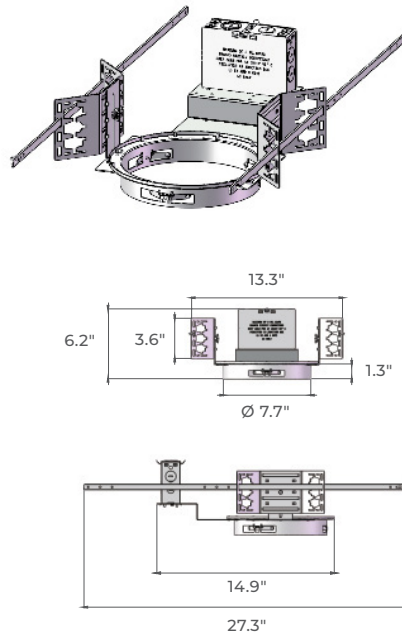


MOUNTING ACCESSORIES

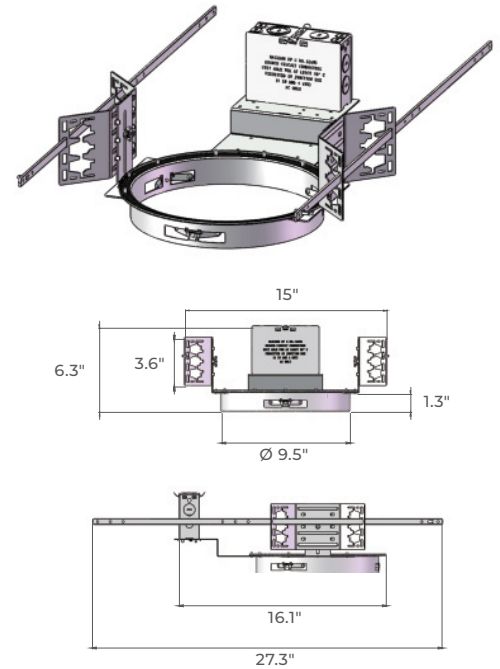
6"



8"



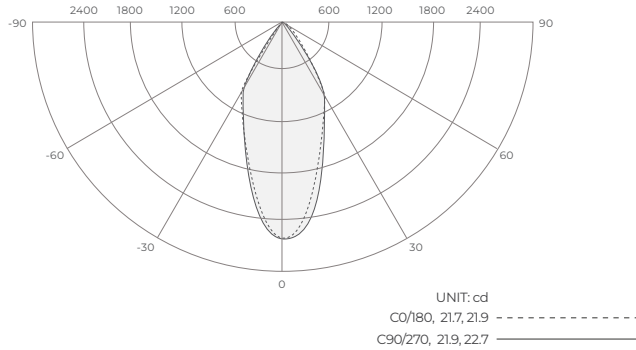
10"



PHOTOMETRICS - 8"-18W-1584lm

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

AVERAGE BEAM ANGLE (50%): 44.1°

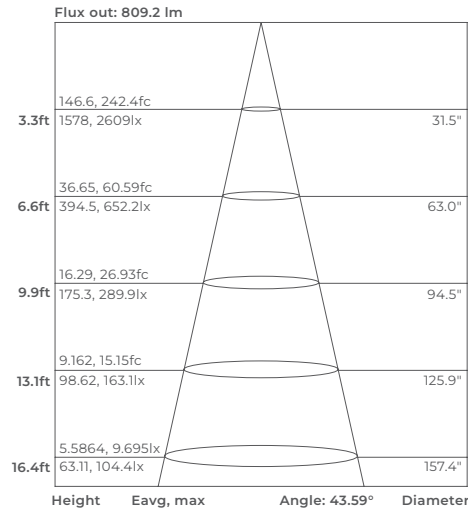


ZONAL FLUX DIAGRAM

T	C0	C45	C90	C135	C180	C225	C270	C315
10°	2070	2133	2220	2134	2034	2036	2100	2125
20°	1387	1414	1441	1413	1383	1372	1397	1399
30°	877.5	895.9	890.6	886.3	891.3	846.0	821.9	831.0
40°	193.5	209.9	238.0	226.1	219.1	209.8	215.7	206.7
50°	39.22	43.94	52.91	49.93	48.69	46.36	46.76	39.83
60°	13.01	14.78	17.95	15.89	15.62	15.75	16.34	13.34
70°	5.343	6.119	7.261	6.352	6.104	6.266	6.507	5.457
80°	1.969	2.286	2.690	2.434	2.309	2.310	2.313	1.985
90°	0.0002	0.0009	0.0032	0.0074	0.0041	0	0	0

LUMINOUS INTENSITY: cd

Average Illuminance Curve



ZONAL LUMEN SUMMARY

T	φ ZONE	φ TOTAL	LUMEN/LAMP percentage
0-10	223.3	223.3	13.6,13.6
10-20	479.6	702.9	42.7,42.7
20-30	528.6	1232	74.8,74.8
30-40	290.4	1522	92.5,92.5
40-50	85.04	1607	97.6,97.6
50-60	24.06	1631	99.1,99.1
60-70	9.751	1641	99.7,99.7
70-80	4.278	1645	99.9,99.9
80-90	0.9728	1646	100,100

UNIT: lm

NOTE

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

COEFFICIENTS OF UTILIZATION

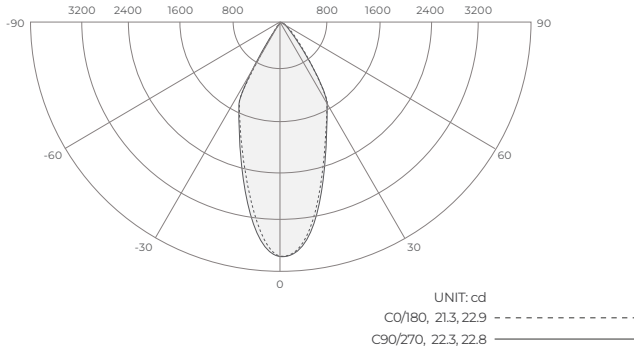
ppc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio (CU)															
0.0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	00
1.0	111	108	106	109	107	105	105	103	101	101	00	98	98	96	96	94
2.0	103	99	96	102	98	95	98	96	93	96	93	91	93	91	89	87
3.0	96	92	88	95	91	87	93	89	86	90	87	85	88	85	83	82
4.0	90	85	81	89	85	81	87	83	80	85	82	79	84	80	78	76
5.0	85	80	75	84	79	75	82	78	74	81	77	74	79	76	73	72
6.0	80	74	70	79	74	70	78	73	70	77	72	69	75	72	69	67
7.0	75	70	66	75	70	66	74	69	65	73	68	65	72	68	65	63
8.0	71	66	62	71	66	62	70	65	61	69	65	61	68	64	61	60
9.0	67	62	58	67	62	58	66	62	58	66	61	58	65	61	58	56
10.0	64	59	55	64	59	55	63	58	55	63	58	55	62	58	55	53



PHOTOMETRICS - 8"-27W-2376lm

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

AVERAGE BEAM ANGLE (50%): 44.6°

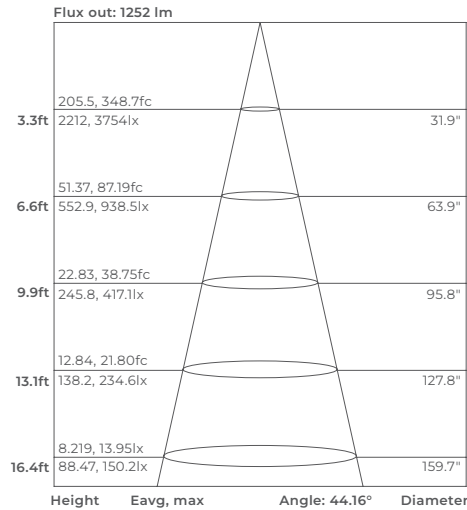


ZONAL FLUX DIAGRAM

T	C0	C45	C90	C135	C180	C225	C270	C315
10°	3075	3138	3180	3033	2896	2913	3044	3146
20°	2080	2099	2088	2016	1958	1958	2027	2072
30°	1348	1341	1274	1235	1205	1193	1218	1276
40°	300.0	311.3	331.4	309.3	298.5	296.9	317.0	319.6
50°	64.22	67.52	72.68	68.11	66.00	66.41	68.83	62.65
60°	20.11	21.80	24.54	21.71	21.00	21.90	23.32	20.51
70°	8.176	8.924	10.02	8.685	8.283	8.732	9.431	8.279
80°	3.040	3.348	3.677	3.250	3.076	3.195	3.406	3.066
90°	0.0020	0.0021	0.0021	0.0017	0	0	0	0

LUMINOUS INTENSITY: cd

Average Illuminance Curve



ZONAL LUMEN SUMMARY

T	Φ ZONE	Φ TOTAL	LUMEN/LAMP percentage
0-10	322.7	322.7	13.5,13.5
10-20	696.5	1019	42.6,42.6
20-30	768.7	1788	74.8,74.8
30-40	423.0	2211	92.5,92.5
40-50	123.0	2334	97.6,97.6
50-60	34.63	2369	99.1,99.1
60-70	13.98	2382	99.7,99.7
70-80	6.112	2389	99.9,99.9
80-90	1.376	2390	100,100

UNIT: lm

NOTE

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

COEFFICIENTS OF UTILIZATION

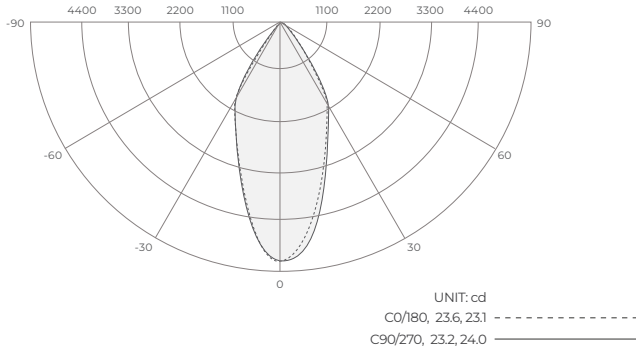
ppc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio (CU)															
0.0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	00
1.0	111	108	106	109	107	105	105	103	101	101	00	98	98	96	96	94
2.0	103	99	96	102	98	95	98	96	93	96	93	91	93	91	89	87
3.0	97	92	88	95	91	87	93	89	86	90	87	85	88	85	83	82
4.0	91	85	81	89	85	81	87	83	80	85	82	79	84	80	78	76
5.0	85	80	75	84	79	75	82	78	74	81	77	74	79	76	73	72
6.0	80	74	70	79	74	70	78	73	70	77	72	69	75	72	69	67
7.0	76	70	66	75	70	66	74	69	65	73	68	65	72	68	65	63
8.0	72	66	62	71	66	62	70	65	61	69	65	61	68	64	61	60
9.0	68	62	58	67	62	58	66	62	58	66	61	58	65	61	58	56
10.0	64	59	55	64	59	55	63	58	55	63	58	55	62	58	55	53



PHOTOMETRICS - 8"-40W-3400lm

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

AVERAGE BEAM ANGLE (50%): 46.9°

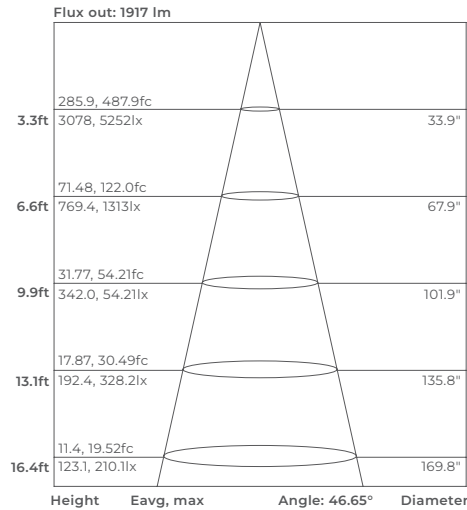


ZONAL FLUX DIAGRAM

T	C0	C45	C90	C135	C180	C225	C270	C315
10°	4207	4415	4558	4486	4303	4317	4343	4361
20°	2908	2989	3048	3017	2951	2915	2939	2924
30°	1783	1845	1841	1886	1860	1768	1722	1715
40°	404.4	449.3	484.6	473.0	456.1	447.0	450.8	437.9
50°	86.32	93.34	102.6	97.79	98.80	98.58	100.2	88.29
60°	28.65	31.97	35.80	31.96	31.76	33.20	33.99	29.04
70°	11.68	13.27	14.63	12.86	12.69	13.51	13.68	11.78
80°	4.325	4.949	5.424	4.908	4.774	4.959	4.903	4.340
90°	0.0042	0.0048	0.0057	0.0085	0.0064	0.0028	0.0019	0.0025

LUMINOUS INTENSITY: cd

Average Illuminance Curve



ZONAL LUMEN SUMMARY

T	φ ZONE	φ TOTAL	LUMEN/LAMP percentage
0-10	456.9	456.9	13.2,13.2
10-20	1007	1464	42.4,42.4
20-30	1112	2576	74.6,74.6
30-40	618.6	3195	92.5,92.5
40-50	177.5	3372	97.6,97.6
50-60	50.50	3423	99.1,99.1
60-70	20.55	3443	99.7,99.7
70-80	9.028	3452	99.9,99.9
80-90	2.048	3454	100,100

UNIT: lm

NOTE

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

COEFFICIENTS OF UTILIZATION

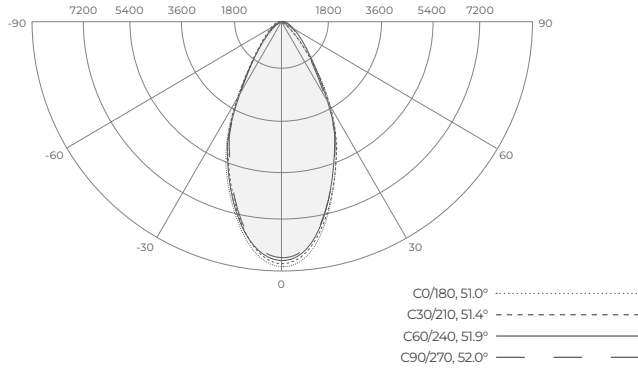
ppc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio (CU)															
0.0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	00
1.0	111	108	106	109	107	105	105	103	101	101	00	98	98	96	95	94
2.0	103	99	96	102	98	95	98	96	93	96	93	91	93	91	89	87
3.0	97	92	88	95	91	87	93	89	86	90	87	85	88	85	83	82
4.0	91	85	81	89	84	81	87	83	80	85	82	79	83	80	78	76
5.0	85	80	75	84	79	75	82	78	74	81	77	74	79	76	73	71
6.0	80	74	70	79	74	70	78	73	70	77	72	69	75	71	68	67
7.0	76	70	66	75	69	65	74	69	65	73	68	65	71	67	64	63
8.0	72	66	62	71	65	62	70	65	61	69	65	61	68	64	61	59
9.0	68	62	58	67	62	58	66	62	58	66	61	58	65	60	57	56
10.0	64	59	55	64	59	55	63	58	55	63	58	55	62	57	54	53



PHOTOMETRICS - 8"-80W-6800lm

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%. Result may vary per actual order.

AVERAGE BEAM ANGLE (50%): 51.6°

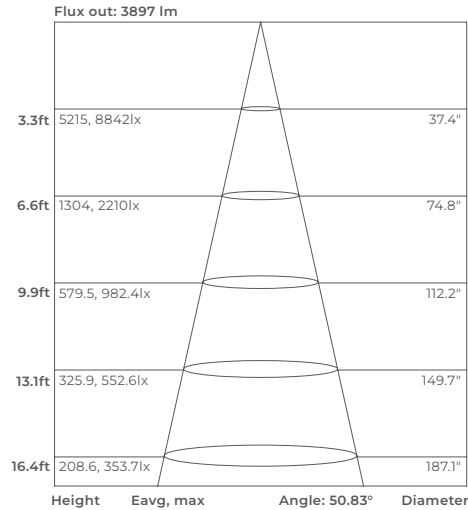


ZONAL FLUX DIAGRAM

T	C0	C45	C90	C135	C180	C225	C270	C315
10°	7872	7743	7625	7552	7858	7706	7709	7577
20°	5741	5648	5579	5538	5777	5662	5706	5565
30°	3072	3196	3154	3133	3168	3217	3245	3126
40°	863.6	934.3	935.4	979.2	923.3	931.5	976.9	922.3
50°	154.7	156.7	165.2	184.7	180.9	153.9	152.0	154.7
60°	31.91	32.07	35.00	42.64	40.87	31.96	31.38	33.02
70°	11.69	11.21	11.99	13.96	13.43	11.35	11.46	12.17
80°	4.327	4.261	4.534	4.810	4.632	4.185	4.544	4.519
90°	0.1629	0.1966	0.1448	0.1684	0.1504	0.1854	0.1127	0.1762

LUMINOUS INTENSITY: cd

Average Illuminance Curve



ZONAL LUMEN SUMMARY

T	φ ZONE	φ TOTAL	LUMEN/LAMP percentage
0-10	775.2	775.2	12.3,12.3
10-20	1854	2630	41.8,41.8
20-30	2027	4656	74,74
30-40	1166	5823	92.6,92.6
40-50	346.1	6169	98.1,98.1
50-60	71.72	6241	99.2,99.2
60-70	20.38	6261	99.2,99.2
70-80	8.342	6269	99.7,99.7
80-90	1.889	6271	99.7,99.7

UNIT: lm

NOTE

The curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

COEFFICIENTS OF UTILIZATION

ppc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio (CU)															
0.0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	00
1.0	111	108	106	109	106	105	105	103	101	101	99	98	97	96	95	94
2.0	103	99	96	102	98	95	98	95	93	95	93	91	93	91	89	87
3.0	97	92	88	95	91	87	93	89	86	90	87	84	88	85	83	81
4.0	90	85	81	89	84	80	87	83	80	85	82	79	83	80	78	76
5.0	85	79	75	84	79	75	82	78	74	81	77	73	79	75	73	71
6.0	80	74	70	79	74	70	78	73	69	76	72	69	75	71	68	67
7.0	75	70	65	75	69	65	73	68	61	72	68	65	71	67	64	63
8.0	71	65	61	71	65	61	70	65	61	68	64	61	68	63	60	59
9.0	67	62	58	67	61	58	66	61	57	65	61	57	64	60	57	56
10.0	64	58	55	64	58	54	63	58	54	62	57	54	61	57	54	53



ZONAL LUMEN TABULATION - 8"-54W-4320lm

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LUMINAIRE
0-30	3,230.2	72.1%
0-40	4,056.7	90.5%
0-60	4,415.3	98.5%
60-90	65.1	1.5%
70-100	22.8	0.5%
90-120	0.0	0%
0-90	4,480.4	100%
90-180	0.0	0%
0-180	4,480.4	100%

LUMENS PER ZONE

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	536.5	12%	90-100	0.0	0%
10-20	1254.1	28%	100-110	0	0%
20-30	1439.5	32.1%	110-120	0	0%
30-40	826.5	18.4%	120-130	0	0%
40-50	265.4	5.9%	130-140	0	0%
50-60	93.2	2.1%	140-150	0	0%
60-70	42.4	0.9%	150-160	0	0%
70-80	18.7	0.4%	160-170	0	0%
80-90	4.1	0.1%	170-180	0	0%

