

CFS 55, 85 or 165 Down Light

Available in lamp color temperatures 3000K, 4000K, or 5000K.

Part Number:

- 55 Watt: CFS-PHDL/55
- 85 Watt: CFS-PHDL/85
- 165 Watt: CFS-PHDL/165

FRAME– In Kits and Reflector Trim:

- *For new construction or where access above ceiling is available.
 - *For old construction specify hinged roughing plate.
 - *10 inch aluminum bright dip reflector.
 - *Trim with acrylic lens.
 - *Adjustable mounting bars included.
- *All components accessible through bottom of fixture.
 - *Available in 55, 85, or 165 watts. (must specify)
 - *Can be made to order. (must specify dimensions)



Induction lighting Features

No electrodes or filaments

- *100,000 hrs rated average life.
- *Low lumen depreciation of <30% @ 60,000 hours.
- *Low operating temperature of components.

High-frequency operation

- *High system efficacy(65-70lm/W)
 - *No flickering
 - *No stroboscopic effect
 - *No noise

Electronic control

- *Output-protected HF generator

Instant (re-)start

- *Light available instantly when needed
 - *Short ignition time <0.5sec

3-line fluorescent coating

- *Choice of color temperature
 - *White light
- *Excellent color rendition (CRI 85)
 - *No color deviation

Induction Lighting Benefits

- *High reliability and virtually maintenance-free operation.
 - *Lasting light output right through life time.
- *Increased safety, more standard luminaire construction.
- *Economic, environment-friendly lighting in situations with long burning hours.
 - *Restful non-fatiguing light.
 - *No danger with rotating machinery.
 - *Non-disturbing in operations.
- *Automatic switch-off in case of lamp or power coupler failure.
 - *Generator resets 15-30 seconds after switch off.
 - *Suitable for security and safety lighting.
 - *More comfort.
- *Useful light immediately after switch-on.
- *Installation can be matched to lighting situations and requirements.
- *Uniform predictable lighting results throughout larger installations; color maintained through life.

INDUCTION LIGHTING

Induction lighting makes use of a technology which is fundamentally different from that of incandescent lamps or today's conventional gas discharge lamps. Instead of the glowing filaments of incandescent lamps, or the electrodes used in conventional gas discharge lamps, light generation is by means of induction– the transmission of energy via a magnetic field– combined with a gas discharge. Combining the basic principles of induction and gas discharge, this revolutionary concept in light generation offers benefits never before possible.

All CFS Inc. products come with a 5 year warranty.

CFS INC.

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PHOTO METRICS FOR 85 WATT DOWN LIGHT

Recessed Down Light

Indoor Applications

Specify source color temperature 3000K, or 4000K

Lamp Technical Data

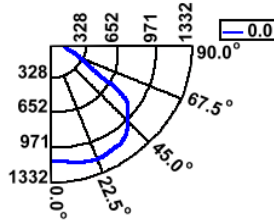
Number of Lamps.....1
 Initial Lumens.....6000
 Distribution.....Direct
 System Watts.....85
 Voltage Range.....120-277
 Rated Avg. Life (Hrs).....100,000
 Symmetry.....Azimuthal
 Photometric Type.....C
 Luminous Shape.....Rectangle
 Units.....Feet
Luminous Dimensions:
 0-80 Axis.....1.000
 90-270 Axis.....1.000
 Height.....0.500
 Spacing Criteria (0).....1.55
 Spacing Criteria (90).....1.55
 Spacing Criteria (Four Luminaires).....1,58

Average Luminaire

Luminance data in Candela / Square Meter

ANG:

0.....11883
 45.....15341
 55.....13737
 65.....10404
 75.....7382
 85.....10506



Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-30	1014	17	22
0-40	1726	29	37
0-60	3142	32	68
0-90	3824	64	83
90-120	308	5	7
90-150	571	10	12
90-180	835	14	18
0-180	4615	77	100

Total Luminaire Efficiency= 32%

Coefficients of Utilization

pf_c= 0.20
pcc-> 0.80 0.70 0.50 0.30 0.10 0.0
pw-> 0.7 0.5 0.3 0.1 0.7 0.5 0.3 0.1 0.5 0.3 0.1 0.5 0.3 0.1 0.0 0.0 0.0 0.0
RCR

0	75	75	75	75	73	73	73	73	70	70	70	67	67	67	64	64	64	63
1	70	66	64	61	68	65	63	60	62	60	58	60	58	57	54	54	54	51
2	63	58	54	50	62	57	53	50	55	51	48	53	50	47	45	45	45	43
3	58	51	46	42	56	50	45	41	48	44	41	46	43	40	38	38	38	30
4	53	45	40	35	51	44	39	32	43	38	35	41	37	34	32	32	32	32
5	49	40	35	30	47	40	34	30	38	33	30	37	33	30	28	28	28	28
6	45	36	30	26	44	36	30	26	34	30	26	33	29	26	24	24	24	24
7	41	33	27	23	40	32	27	23	31	26	23	30	26	23	21	21	21	21
8	38	30	24	21	37	29	24	20	28	24	20	28	23	20	19	19	19	19
9	36	27	22	18	35	27	22	18	26	21	18	25	21	18	17	17	17	17
10	34	25	20	17	33	25	20	17	24	20	16	23	19	16	15	15	15	15

PHOTO METRICS FOR 165 WATT DOWN LIGHT

Luminaire: Formed aluminum housing, spun semi-specular aluminum reflector, no enclosure.
 Lamp: One 165 Watt induction lamp rated at 12,000 lumens.

DEG	CANDELA	LUMENS
0	2123	
5	2146	207
15	2301	648
25	2325	1086
35	2533	1585
45	2422	1858
55	1851	1651
65	1073	1065
75	354	390
85	25	36
90	0	

ZONAL LUMEN SUMMARY	ZONE	LUMENS	%LAMP	%FIXT
0- 30		1941	16.2	22.8
0- 40		3526	29.4	41.4
0- 60		7036	58.6	82.5
0- 90		8527	71.1	100.0
90-180		0	0.0	0.0
0-180		8527	71.1	100.0

TOTAL LUMINAIRE EFFICIENCY: 71.1%
 CIE TYPE: DIRECT
 LUMINAIRE SPACING CRITERION = 1.7
 LUMINOUS DIAMETER:10.000

LUMINANCE IN CANDELA PER SQUARE METER	ANGLE	AVERAGE
IN DEG		
0		41895.
45		67593.
55		63683.
65		50103.
75		26991.
85		5660.

CANDELA DISTRIBUTION	ZONAL LUMEN SUMMARY
0.0	0- 5 51.
0 2123	5- 10 156.
5 2146	10- 15 268.
10 2213	15- 20 380.
15 2301	20- 25 481.
20 2287	25- 30 605.
25 2325	30- 35 733.
30 2448	35- 40 852.
35 2533	40- 45 924.
40 2547	45- 50 934.
45 2422	50- 55 885.
50 2187	55- 60 766.
55 1851	60- 65 615.
60 1459	65- 70 450.
65 1073	70- 75 268.
70 696	75- 80 121.
75 354	80- 85 36.
80 132	85- 90 1.
85 25	
90 0	

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	85	85	85	85	83	83	83	83	79	79	79	76	76	76	73	73	73	71
1	78	75	73	70	76	74	71	69	71	69	67	68	66	65	65	64	63	61
2	72	66	62	58	70	65	61	58	63	59	56	60	57	55	58	56	54	52
3	66	59	53	49	64	58	53	49	55	51	48	54	50	47	52	49	46	45
4	60	52	46	41	58	51	45	41	49	44	40	47	43	40	46	42	39	38
5	54	45	39	34	53	45	39	34	43	38	34	42	37	34	40	36	33	32
6	50	40	34	29	48	40	34	29	38	33	29	37	32	29	36	32	28	27
7	46	36	29	25	44	35	29	25	34	29	25	33	28	24	32	28	24	23
8	42	32	25	21	40	31	25	21	30	25	21	29	24	21	28	24	21	19
9	38	28	22	18	37	28	22	18	27	21	18	26	21	18	25	21	17	16
10	35	25	19	15	34	25	19	15	24	19	15	23	19	15	23	18	15	14

