

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 19368

Luminaire Tested: **210-D-CF3/13+INC**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19368
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 210-D-CF3/13+INC
Description: INTERIOR CEILING MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: 3 SYL CF13DS/E/830 CPFL LAMPS & 1 PHILIPS 50 W PAR 20. LUMEN RATING = 3500 LMS.
Ballast/Driver: -

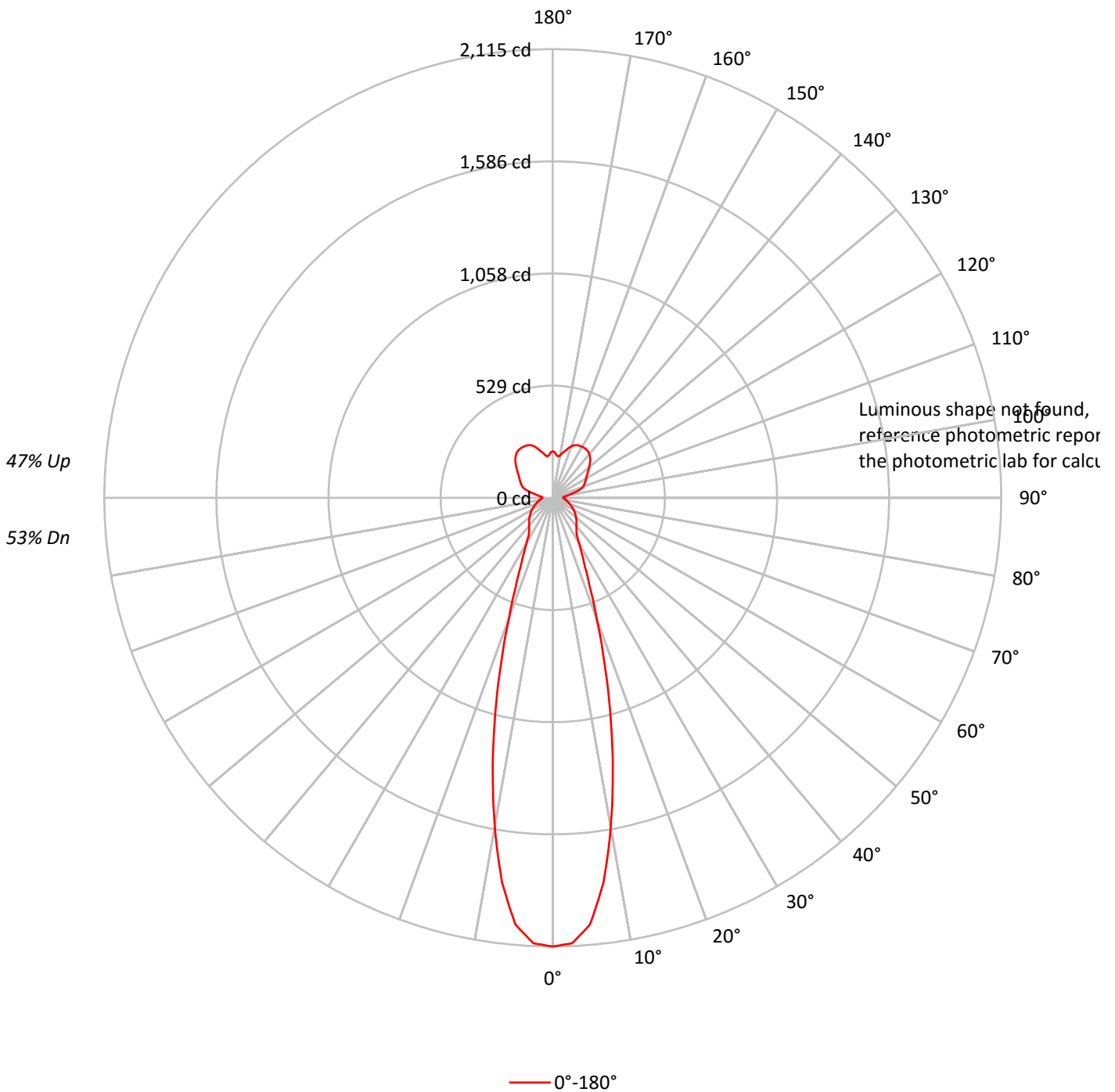
Summary

Lumens per Lamp: 3500 (1 lamp)
Luminaire Lumens: 2344.0 lumens
Efficiency: 67.0%
Efficacy: 25.5 lumens/watt
Spacing Criteria (0/90/45): 0.5 / 0.5 / 0.5
Luminous Opening: (L: 0' x W: -0.33' x H: 0.44'
CIE Type: General Diffuse

Input Watts (W): 92
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





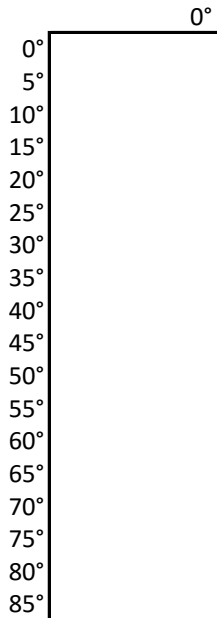
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																				
0	72	72	72	72	67	67	67	67	57	57	57		48	48	48		39	39	39	35
1	66	63	61	58	61	59	56	54	50	48	47		42	41	40		35	34	33	30
2	61	56	52	49	56	52	49	46	45	42	40		38	36	35		32	30	29	26
3	56	50	46	42	52	47	43	40	40	37	35		35	32	30		29	27	26	24
4	52	45	40	37	48	42	38	35	37	34	31		32	29	27		27	25	24	21
5	48	41	36	33	45	39	34	31	34	30	28		29	27	25		25	23	22	20
6	45	38	33	29	42	36	31	28	31	28	25		27	25	23		24	22	20	18
7	42	35	30	27	39	33	28	25	29	26	23		25	23	21		22	20	19	17
8	40	32	28	24	37	31	26	23	27	24	21		24	21	19		21	19	18	16
9	38	30	26	22	35	29	24	22	25	22	20		23	20	18		20	18	17	15
10	36	28	24	21	33	27	23	20	24	21	19		21	19	17		19	17	16	14

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	178.0	7.6	5.1
10°-20°	286.6	12.2	8.2
20°-30°	173.2	7.4	4.9
30°-40°	124.8	5.3	3.6
40°-50°	122.1	5.2	3.5
50°-60°	115.3	4.9	3.3
60°-70°	98.4	4.2	2.8
70°-80°	78.6	3.4	2.2
80°-90°	61.2	2.6	1.7
90°-100°	61.9	2.6	1.8
100°-110°	121.8	5.2	3.5
110°-120°	165.5	7.1	4.7
120°-130°	179.9	7.7	5.1
130°-140°	191.7	8.2	5.5
140°-150°	173.1	7.4	4.9
150°-160°	126.0	5.4	3.6
160°-170°	66.3	2.8	1.9
170°-180°	19.3	0.8	0.6
0°-30°	637.8	27.2	18.2
0°-40°	762.6	32.5	21.8
0°-60°	1000.0	42.7	28.6
0°-90°	1238.2	52.8	35.4
90°-120°	349.3	14.9	10.0
90°-150°	894.1	38.1	25.5
90°-180°	1106.0	47.2	31.6
0°-180°	2344.0	100.0	67.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2115	
5°	2019	178
15°	1046	287
25°	359	173
35°	194	125
45°	158	122
55°	129	115
65°	99	98
75°	74	79
85°	56	47
90°	50	27
95°	52	48
105°	118	122
115°	167	166
125°	200	180
135°	249	192
145°	277	173
155°	274	126
165°	230	66
175°	202	19
180°	218	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	2114.9
2.5°	2101.2
5°	2018.9
7.5°	1829.3
10°	1575.2
12.5°	1308.3
15°	1045.6
17.5°	802.9
20°	602.4
22.5°	458.0
25°	359.3
27.5°	294.4
30°	248.6
32.5°	211.8
35°	194.3
37.5°	182.7
40°	173.9
42.5°	165.8
45°	157.8
47.5°	150.4
50°	143.1
52.5°	136.2
55°	128.9
57.5°	121.6
60°	113.8
62.5°	106.5
65°	98.9
67.5°	92.1
70°	85.6
72.5°	79.5
75°	74.2
77.5°	69.1
80°	64.1
82.5°	59.6
85°	55.9
87.5°	52.1
90°	49.5
92.5°	49.0
95°	52.1
97.5°	64.1
100°	74.6
102.5°	90.7
105°	118.0
107.5°	139.6
110°	152.7

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CANDELA DISTRIBUTION (continued):

	0°
112.5°	159.5
115°	166.9
117.5°	174.2
120°	181.8
122.5°	189.9
125°	199.6
127.5°	211.4
130°	223.9
132.5°	237.0
135°	249.2
137.5°	260.2
140°	268.7
142.5°	274.4
145°	277.4
147.5°	277.9
150°	277.9
152.5°	276.5
155°	273.5
157.5°	268.4
160°	259.1
162.5°	245.1
165°	230.4
167.5°	217.3
170°	204.4
172.5°	196.6
175°	201.9
177.5°	215.3
180°	218.5

(END OF REPORT)