

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: 19371A

Luminaire Tested: **230-CF2/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19371A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 230-CF2/13
Description: INTERIOR CEILING MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO 13 WATT CPFL LAMPS. LUMEN RATING = 1800 LMS.

Ballast/Driver: -

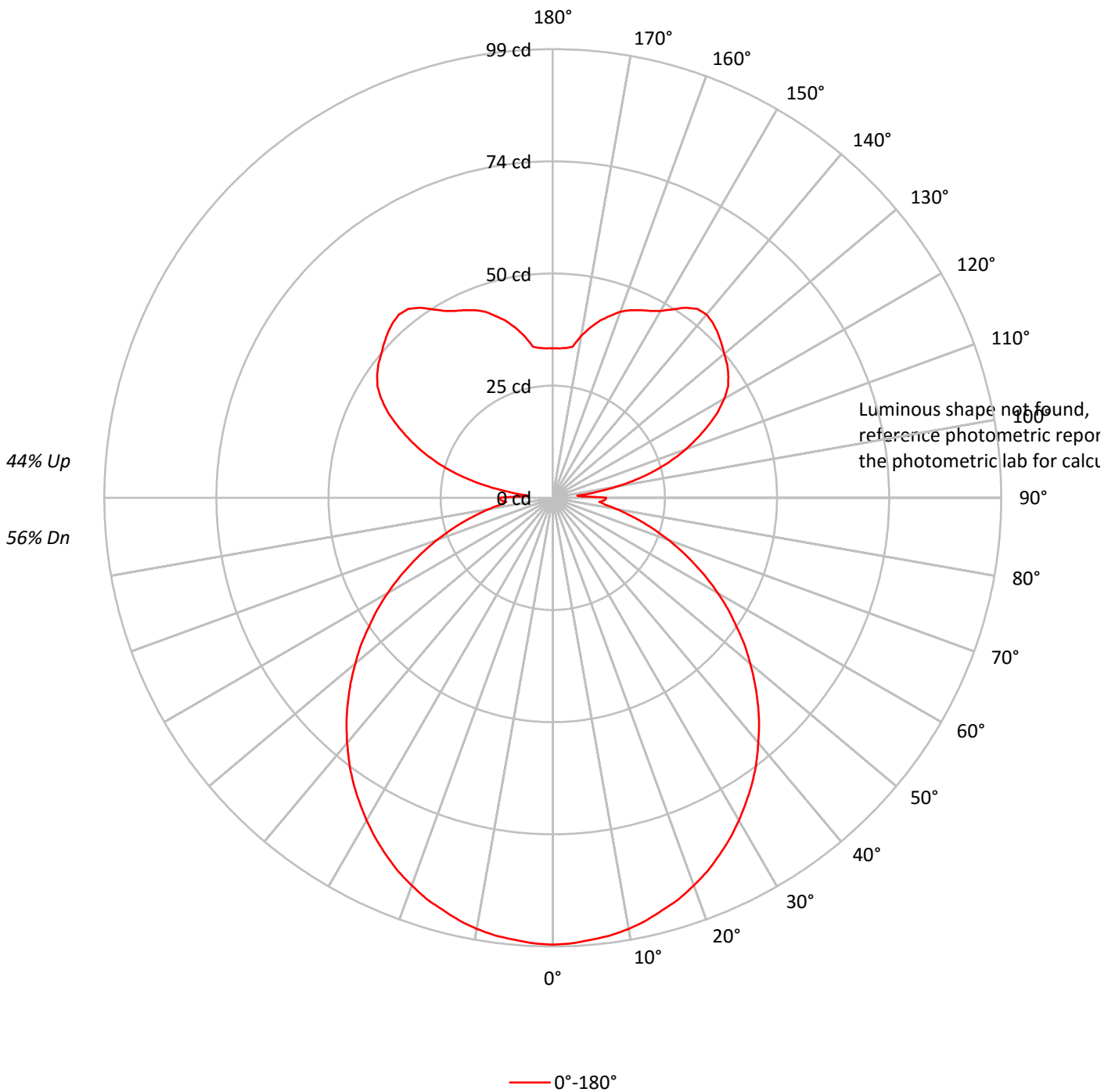
Summary

Lumens per Lamp: 1800 (1 lamp)
Luminaire Lumens: 507.4 lumens
Efficiency: 28.2%
Efficacy: -
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36
Luminous Opening: (L: 0 ' x W: -1.08 ' x H: 0.11 '
CIE Type: General Diffuse

Input Watts (W): 0
Input Voltage (V): NR
Input Current (Ain): 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	31	31	31	31	28	28	28	28	24	24	24	21	21	21	17	17	17	16
1	28	26	25	24	26	25	24	23	21	20	20	18	17	17	15	15	14	13
2	25	23	21	20	23	21	20	18	18	17	16	16	15	14	13	13	12	11
3	23	20	18	16	21	19	17	15	16	15	14	14	13	12	12	11	10	9
4	21	18	15	14	19	17	15	13	14	13	11	12	11	10	10	9	9	8
5	19	16	13	12	18	15	13	11	13	11	10	11	10	9	9	8	8	7
6	18	14	12	10	16	13	11	10	12	10	9	10	9	8	8	7	7	6
7	16	13	11	9	15	12	10	8	10	9	8	9	8	7	8	7	6	5
8	15	12	9	8	14	11	9	7	10	8	7	8	7	6	7	6	5	5
9	14	11	8	7	13	10	8	7	9	7	6	8	6	5	7	5	5	4
10	13	10	8	6	12	9	7	6	8	6	5	7	6	5	6	5	4	4

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	9.3	1.8	0.5
10°-20°	26.6	5.2	1.5
20°-30°	40.1	7.9	2.2
30°-40°	48.0	9.5	2.7
40°-50°	49.4	9.7	2.7
50°-60°	44.3	8.7	2.5
60°-70°	34.2	6.7	1.9
70°-80°	21.6	4.3	1.2
80°-90°	12.7	2.5	0.7
90°-100°	9.4	1.9	0.5
100°-110°	24.5	4.8	1.4
110°-120°	37.4	7.4	2.1
120°-130°	42.2	8.3	2.3
130°-140°	39.7	7.8	2.2
140°-150°	32.0	6.3	1.8
150°-160°	21.2	4.2	1.2
160°-170°	11.5	2.3	0.6
170°-180°	3.2	0.6	0.2
0°-30°	76.0	15.0	4.2
0°-40°	124.0	24.4	6.9
0°-60°	217.7	42.9	12.1
0°-90°	286.2	56.4	15.9
90°-120°	71.4	14.1	4.0
90°-150°	185.3	36.5	10.3
90°-180°	221.0	43.6	12.3
0°-180°	507.4	100.0	28.2

CANDELA DISTRIBUTION:

0°	Flux
0°	99
5°	98
15°	94
25°	87
35°	77
45°	64
55°	50
65°	34
75°	20
85°	10
90°	12
95°	5
105°	24
115°	38
125°	47
135°	52
145°	51
155°	46
165°	40
175°	33
180°	33

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CANDELA DISTRIBUTION (FULL):

0°	
0°	98.6
2.5°	98.4
5°	97.9
7.5°	97.4
10°	96.6
12.5°	95.5
15°	94.1
17.5°	92.8
20°	91.0
22.5°	89.2
25°	87.0
27.5°	84.7
30°	82.2
32.5°	79.5
35°	76.8
37.5°	73.8
40°	70.6
42.5°	67.4
45°	64.0
47.5°	60.5
50°	56.9
52.5°	53.4
55°	49.5
57.5°	45.9
60°	42.1
62.5°	38.3
65°	34.5
67.5°	30.8
70°	27.2
72.5°	23.6
75°	20.3
77.5°	17.1
80°	14.3
82.5°	11.7
85°	10.3
87.5°	11.5
90°	11.8
92.5°	6.5
95°	5.4
97.5°	9.6
100°	14.5
102.5°	19.1
105°	23.6
107.5°	27.5
110°	31.2



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CANDELA DISTRIBUTION (continued):

	0°
112.5°	34.6
115°	37.9
117.5°	41.1
120°	43.7
122.5°	45.9
125°	47.3
127.5°	48.5
130°	49.4
132.5°	50.5
135°	51.5
137.5°	52.3
140°	52.8
142.5°	52.5
145°	51.2
147.5°	49.3
150°	47.6
152.5°	46.5
155°	45.7
157.5°	44.8
160°	43.7
162.5°	42.1
165°	40.5
167.5°	38.5
170°	36.3
172.5°	33.6
175°	33.2
177.5°	33.0
180°	33.0

(END OF REPORT)