

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: 20429

Luminaire Tested: **248-EL-16-CF2/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20429
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 248-EL-16-CF2/13
Description: INTERIOR CEILING MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE
PLASTIC BOWL LENS
Light Source: TWO SYLVANIA 13 WATT CPFL LAMPS

CF13DS/E/830. LUMEN RATING = 1600 LMS.

Ballast/Driver: -

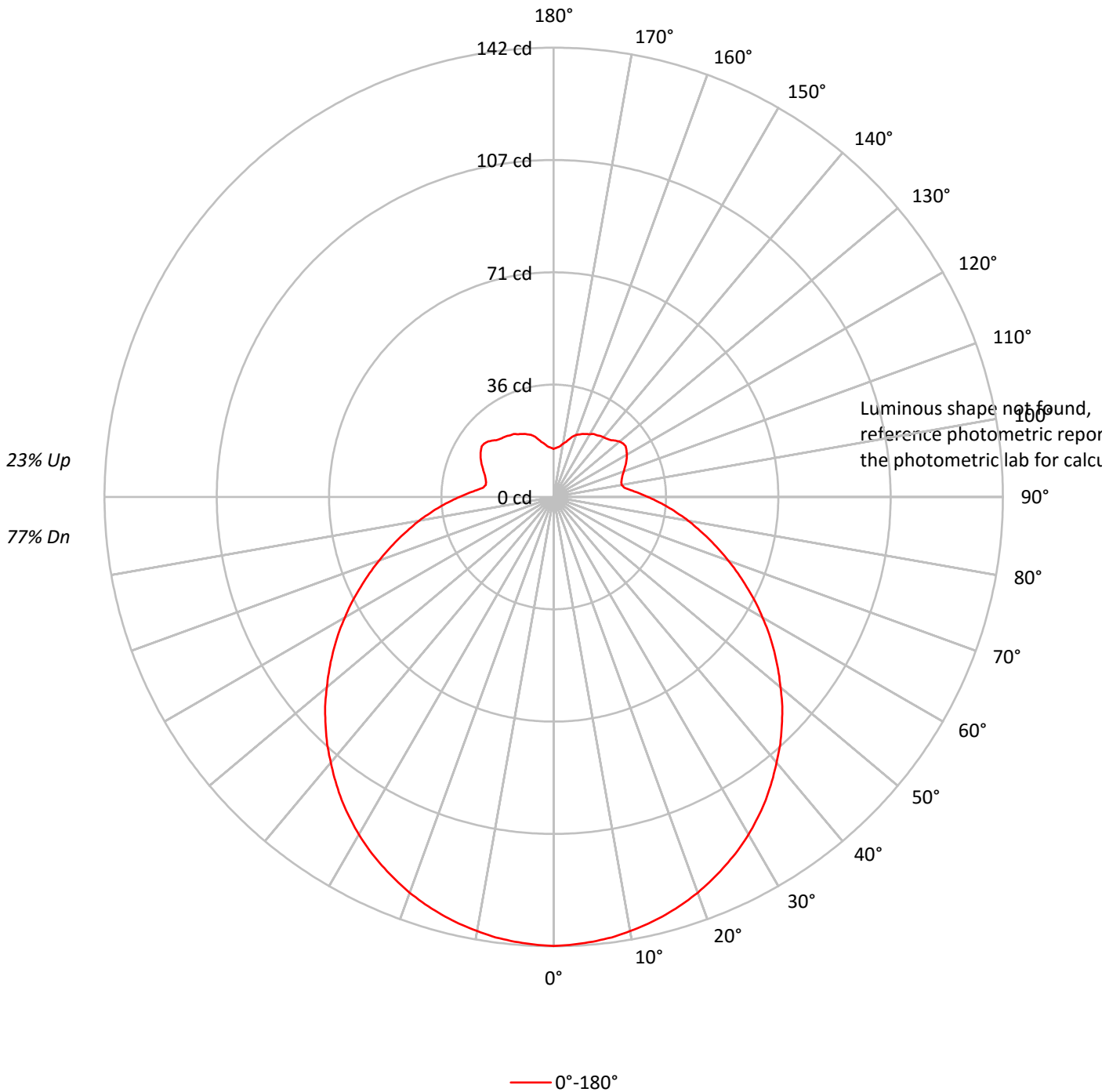
Summary

Lumens per Lamp: 1600 (1 lamp)
Luminaire Lumens: 651.8 lumens
Efficiency: 40.7%
Efficacy: 25.1 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.43
Luminous Opening: (L: 0' x W: -1.1' x H: 0.25'
CIE Type: Semi-Direct

Input Watts (W): 26
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	46	46	46	46	44	44	44	44	40	40	40	36	36	36	33	33	33	31
1	41	39	37	35	39	37	35	34	34	32	31	30	29	28	27	26	26	24
2	37	33	30	28	35	32	29	27	29	27	25	26	24	23	23	22	21	19
3	34	29	26	23	32	28	24	22	25	22	20	23	21	19	20	19	17	16
4	31	26	22	19	29	24	21	18	22	19	17	20	18	16	18	16	15	13
5	28	23	19	16	27	22	18	16	20	17	15	18	16	14	16	14	13	11
6	26	20	17	14	24	19	16	14	18	15	13	16	14	12	15	13	11	10
7	24	18	15	12	23	18	14	12	16	13	11	15	12	10	13	11	10	9
8	22	17	13	11	21	16	13	10	15	12	10	13	11	9	12	10	9	8
9	21	15	12	10	20	15	12	9	13	11	9	12	10	8	11	9	8	7
10	19	14	11	9	18	13	10	8	12	10	8	11	9	7	10	8	7	6

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	13.4	2.1	0.8
10°-20°	38.6	5.9	2.4
20°-30°	59.3	9.1	3.7
30°-40°	73.1	11.2	4.6
40°-50°	78.7	12.1	4.9
50°-60°	76.2	11.7	4.8
60°-70°	66.8	10.2	4.2
70°-80°	53.6	8.2	3.3
80°-90°	39.5	6.1	2.5
90°-100°	27.2	4.2	1.7
100°-110°	23.7	3.6	1.5
110°-120°	25.0	3.8	1.6
120°-130°	24.6	3.8	1.5
130°-140°	19.9	3.1	1.2
140°-150°	15.0	2.3	0.9
150°-160°	10.2	1.6	0.6
160°-170°	5.4	0.8	0.3
170°-180°	1.5	0.2	0.1
0°-30°	111.3	17.1	7.0
0°-40°	184.4	28.3	11.5
0°-60°	339.3	52.1	21.2
0°-90°	499.3	76.6	31.2
90°-120°	75.9	11.6	4.7
90°-150°	135.4	20.8	8.5
90°-180°	153.0	23.5	9.6
0°-180°	651.8	100.0	40.7

CANDELA DISTRIBUTION:

	0°	Flux
0°	142	
5°	141	13
15°	137	39
25°	128	59
35°	117	73
45°	102	79
55°	85	76
65°	67	67
75°	51	54
85°	36	31
90°	30	16
95°	24	19
105°	22	24
115°	25	25
125°	28	25
135°	25	20
145°	24	15
155°	22	10
165°	19	5
175°	16	2
180°	15	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	141.9
2.5°	141.6
5°	141.1
7.5°	140.4
10°	139.3
12.5°	138.1
15°	136.7
17.5°	135.0
20°	133.1
22.5°	130.9
25°	128.5
27.5°	126.0
30°	123.2
32.5°	120.1
35°	116.9
37.5°	113.3
40°	109.6
42.5°	106.0
45°	102.0
47.5°	98.0
50°	93.6
52.5°	89.4
55°	85.1
57.5°	80.8
60°	76.2
62.5°	71.9
65°	67.3
67.5°	63.0
70°	58.7
72.5°	54.6
75°	50.6
77.5°	46.7
80°	43.2
82.5°	39.5
85°	36.2
87.5°	32.8
90°	29.8
92.5°	27.0
95°	24.5
97.5°	22.5
100°	21.8
102.5°	21.9
105°	22.3
107.5°	22.8
110°	23.6

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CANDELA DISTRIBUTION (continued):

	0°
112.5°	24.3
115°	25.2
117.5°	26.0
120°	26.7
122.5°	27.3
125°	27.8
127.5°	27.7
130°	27.2
132.5°	26.4
135°	25.4
137.5°	24.9
140°	24.6
142.5°	24.3
145°	23.8
147.5°	23.6
150°	22.9
152.5°	22.4
155°	22.0
157.5°	21.4
160°	20.9
162.5°	20.0
165°	18.9
167.5°	17.8
170°	17.1
172.5°	16.2
175°	15.8
177.5°	15.5
180°	15.2

(END OF REPORT)