

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: 19435B

Luminaire Tested: **441-16-CF1/32**

Issue Date: 3/3/2020

**Test Information**

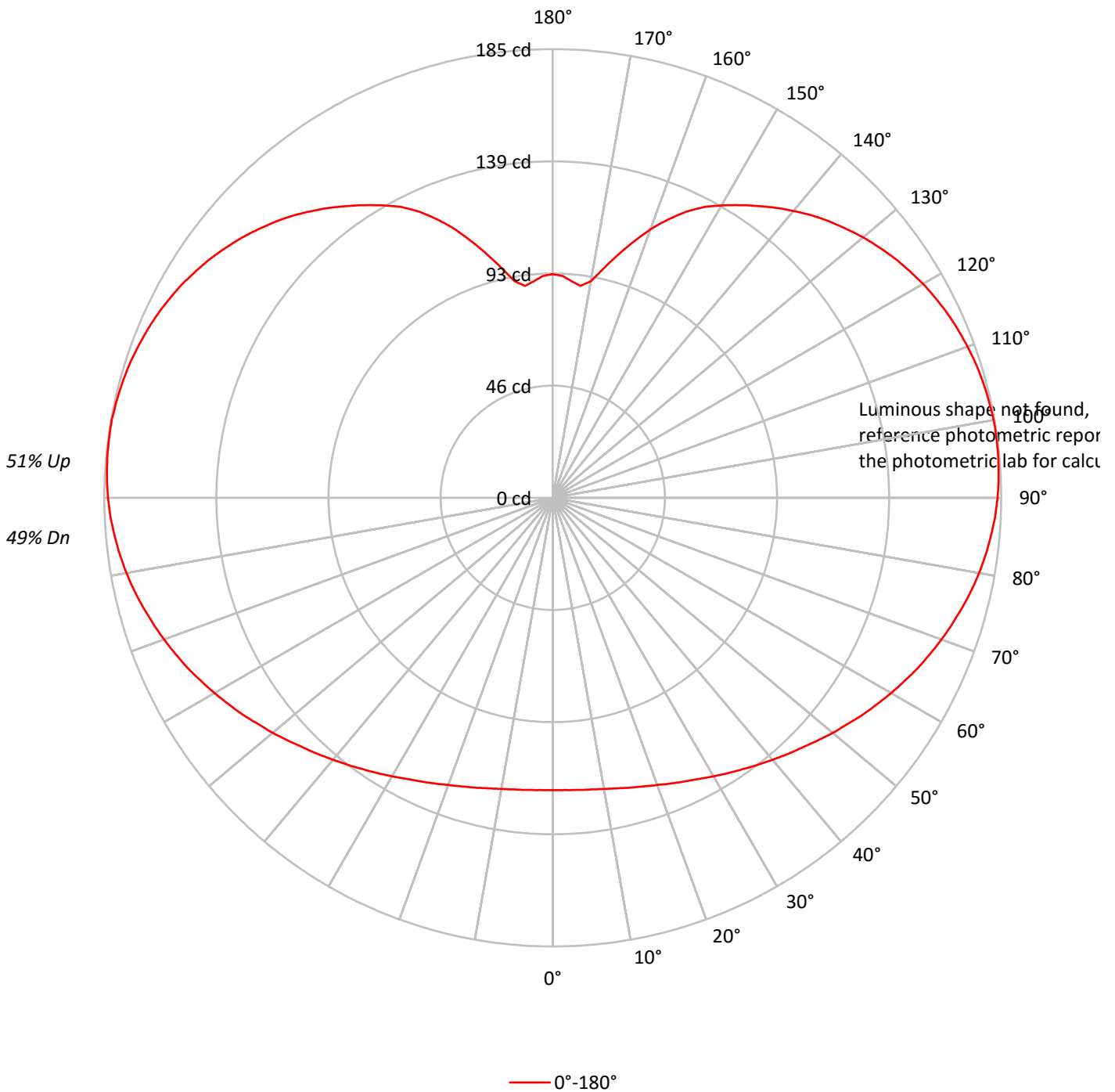
Test Method: LM-66-11  
Report Number: 19435B  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 441-16-CF1/32  
Description: INTERIOR SUSPENDED LUMINAIRE WITH WHITE PLASTIC GLOBE LENS  
  
Light Source: ONE 32 WATT CPFL LAMP. LUMEN RATING = 2400 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 2037.0 lumens  
Efficiency: 84.9%  
Efficacy: -  
Spacing Criteria (0/90/45): 1.76 / 1.76 / 1.99  
Luminous Opening: (L: 0 ' x W: -0.08 ' x H: 0.67 '  
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



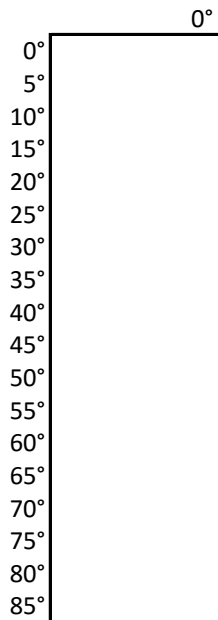


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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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	91	91	91	91	84	84	84	84	70	70	70	58	58	58	47	47	47	41
1	79	73	68	64	72	67	63	59	55	52	49	45	42	40	35	33	31	26
2	70	62	55	49	64	56	50	45	46	42	38	37	34	30	28	26	23	19
3	63	53	45	39	57	49	42	36	40	34	30	32	28	24	24	21	18	15
4	57	46	38	32	52	42	35	30	35	29	25	27	23	20	21	18	15	12
5	52	41	33	27	47	37	30	25	31	25	21	24	20	16	18	15	12	9
6	48	36	28	23	43	33	26	21	27	22	17	22	17	14	16	13	11	8
7	44	32	25	20	40	30	23	18	24	19	15	20	15	12	15	12	9	7
8	41	29	22	17	37	27	20	16	22	17	13	18	14	10	14	10	8	6
9	38	27	20	15	34	24	18	14	20	15	12	16	12	9	13	9	7	5
10	35	24	18	13	32	22	16	12	18	14	10	15	11	8	12	8	6	4

**AVERAGE LUMINANCE (cd/sqm):**





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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	11.6	0.6	0.5
10°-20°	35.1	1.7	1.5
20°-30°	59.9	2.9	2.5
30°-40°	86.0	4.2	3.6
40°-50°	113.0	5.5	4.7
50°-60°	140.0	6.9	5.8
60°-70°	164.8	8.1	6.9
70°-80°	184.9	9.1	7.7
80°-90°	197.8	9.7	8.2
90°-100°	201.1	9.9	8.4
100°-110°	194.3	9.5	8.1
110°-120°	178.2	8.7	7.4
120°-130°	154.4	7.6	6.4
130°-140°	124.8	6.1	5.2
140°-150°	92.5	4.5	3.9
150°-160°	60.2	3.0	2.5
160°-170°	29.8	1.5	1.2
170°-180°	8.6	0.4	0.4
0°-30°	106.6	5.2	4.4
0°-40°	192.6	9.5	8.0
0°-60°	445.5	21.9	18.6
0°-90°	993.1	48.8	41.4
90°-120°	573.7	28.2	23.9
90°-150°	945.4	46.4	39.4
90°-180°	1044.0	51.3	43.5
0°-180°	2037.0	100.0	84.9

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	120	
5°	121	12
15°	124	35
25°	129	60
35°	137	86
45°	146	113
55°	156	140
65°	166	165
75°	175	185
85°	181	148
90°	184	101
95°	184	151
105°	184	194
115°	180	178
125°	172	154
135°	161	125
145°	147	92
155°	130	60
165°	104	30
175°	90	9
180°	92	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	120.5
2.5°	120.6
5°	120.9
7.5°	121.3
10°	121.9
12.5°	122.7
15°	123.7
17.5°	124.8
20°	126.0
22.5°	127.5
25°	129.0
27.5°	130.7
30°	132.6
32.5°	134.6
35°	136.6
37.5°	138.8
40°	141.0
42.5°	143.3
45°	145.6
47.5°	148.1
50°	150.8
52.5°	153.2
55°	156.0
57.5°	158.5
60°	161.1
62.5°	163.6
65°	166.1
67.5°	168.4
70°	170.7
72.5°	172.8
75°	174.9
77.5°	176.8
80°	178.6
82.5°	180.1
85°	181.4
87.5°	182.6
90°	183.5
92.5°	184.1
95°	184.5
97.5°	184.7
100°	184.7
102.5°	184.3
105°	183.8
107.5°	183.1
110°	182.1



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	181.0
115°	179.7
117.5°	178.1
120°	176.4
122.5°	174.3
125°	172.2
127.5°	169.7
130°	167.1
132.5°	164.2
135°	161.2
137.5°	158.0
140°	154.4
142.5°	150.8
145°	146.9
147.5°	143.1
150°	139.2
152.5°	135.2
155°	130.1
157.5°	124.2
160°	117.8
162.5°	110.7
165°	103.6
167.5°	96.8
170°	90.7
172.5°	88.1
175°	89.6
177.5°	91.6
180°	92.2

(END OF REPORT)