

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: 18028A

Luminaire Tested: **441-12-CF1/32**

Issue Date: 3/3/2020

**Test Information**

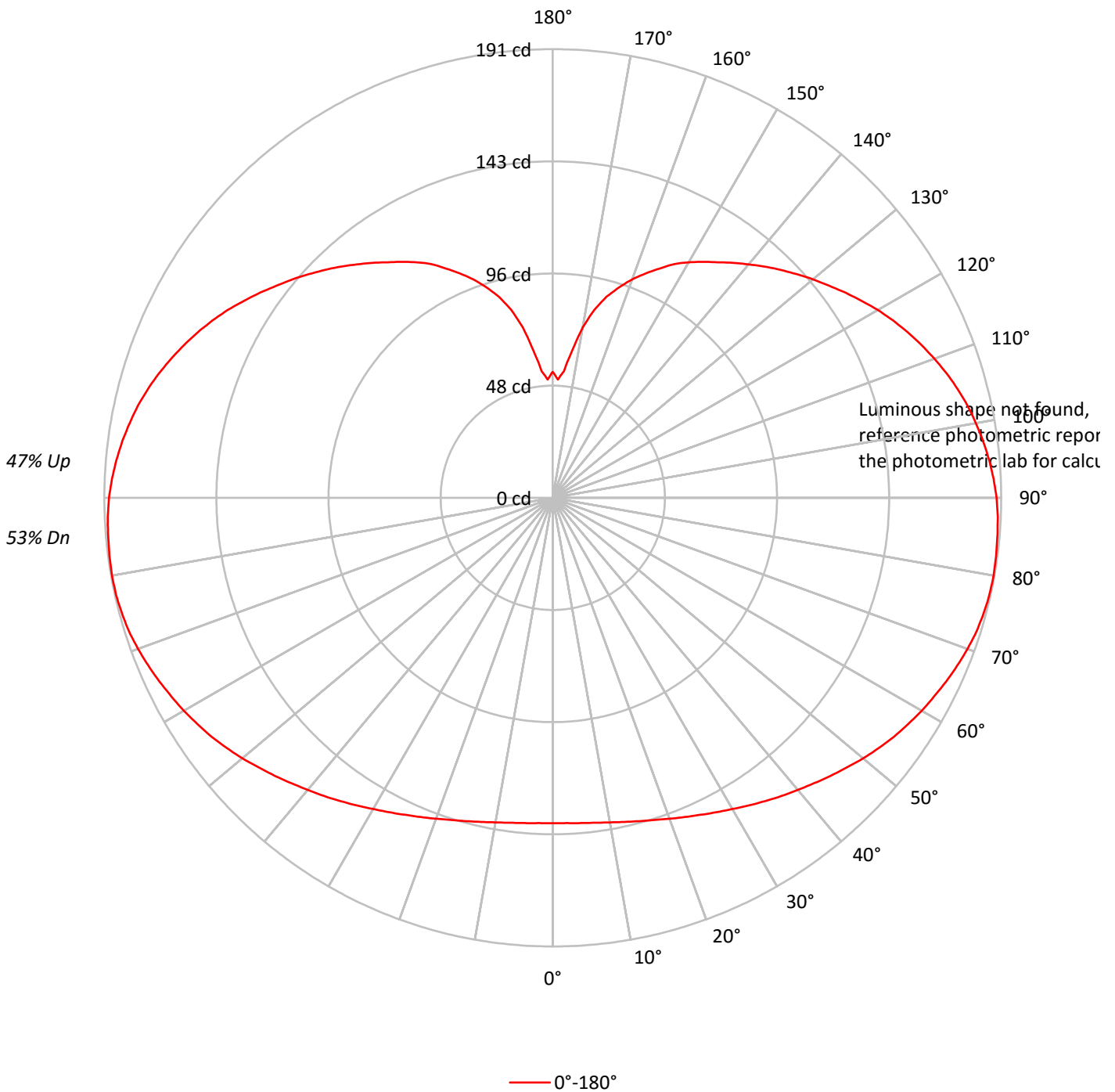
Test Method: LM-66-11  
Report Number: 18028A  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 441-12-CF1/32  
Description: INDOOR FLUORESCENT SUSPENDED LUMINAIRE WITH WHITE TOP AND WHITE  
PLASTIC GLOBE LENS  
Light Source: ONE 32 WATT CPFL LAMP. LUMEN RATING = 2400 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 2061.3 lumens  
Efficiency: 85.9%  
Efficacy: -  
Spacing Criteria (0/90/45): 1.76 / 1.76 / 1.98  
Luminous Opening: (L: 0 ' x W: -1 ' x H: 0.5 '  
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



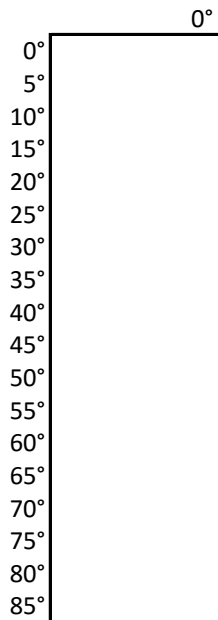


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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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	93	93	93	93	86	86	86	86	73	73	73	62	62	62	51	51	51	46
1	80	75	70	65	74	69	64	60	58	54	51	48	45	43	38	36	34	30
2	72	63	56	50	65	58	52	46	48	43	39	39	36	32	31	28	26	22
3	64	54	46	40	59	50	43	37	41	36	31	34	29	26	26	23	20	17
4	58	47	39	33	53	43	36	30	36	30	26	29	25	21	23	19	17	13
5	53	41	33	27	48	38	31	25	32	26	21	26	21	17	20	17	14	11
6	49	37	29	23	44	34	27	21	28	22	18	23	18	15	18	15	12	9
7	45	33	25	20	41	30	23	18	25	20	16	21	16	13	16	13	10	8
8	42	30	22	17	38	27	21	16	23	18	14	19	14	11	15	11	9	7
9	39	27	20	15	35	25	18	14	21	16	12	17	13	10	14	10	8	6
10	36	25	18	13	33	23	17	12	19	14	11	16	12	9	13	9	7	5

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





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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	13.3	0.6	0.6
10°-20°	40.5	2.0	1.7
20°-30°	69.1	3.4	2.9
30°-40°	99.1	4.8	4.1
40°-50°	129.7	6.3	5.4
50°-60°	159.1	7.7	6.6
60°-70°	183.5	8.9	7.6
70°-80°	200.7	9.7	8.4
80°-90°	207.3	10.1	8.6
90°-100°	203.3	9.9	8.5
100°-110°	188.7	9.2	7.9
110°-120°	165.5	8.0	6.9
120°-130°	136.7	6.6	5.7
130°-140°	106.4	5.2	4.4
140°-150°	77.2	3.7	3.2
150°-160°	50.1	2.4	2.1
160°-170°	25.2	1.2	1.1
170°-180°	5.9	0.3	0.2
0°-30°	122.9	6.0	5.1
0°-40°	222.0	10.8	9.3
0°-60°	510.8	24.8	21.3
0°-90°	1102.3	53.5	45.9
90°-120°	557.6	27.0	23.2
90°-150°	877.8	42.6	36.6
90°-180°	959.0	46.5	40.0
0°-180°	2061.3	100.0	85.9

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	138	
5°	139	13
15°	142	40
25°	149	69
35°	158	99
45°	167	130
55°	177	159
65°	185	183
75°	190	201
85°	190	155
90°	189	104
95°	186	152
105°	179	189
115°	167	166
125°	152	137
135°	137	106
145°	122	77
155°	108	50
165°	89	25
175°	54	6
180°	54	

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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	138.5
2.5°	138.6
5°	139.0
7.5°	139.5
10°	140.3
12.5°	141.3
15°	142.5
17.5°	143.8
20°	145.4
22.5°	147.1
25°	148.9
27.5°	150.9
30°	153.0
32.5°	155.3
35°	157.6
37.5°	160.0
40°	162.3
42.5°	164.8
45°	167.4
47.5°	169.9
50°	172.6
52.5°	175.0
55°	177.4
57.5°	179.4
60°	181.4
62.5°	183.1
65°	184.9
67.5°	186.5
70°	188.0
72.5°	189.2
75°	190.0
77.5°	190.5
80°	190.6
82.5°	190.4
85°	190.1
87.5°	189.7
90°	189.0
92.5°	187.9
95°	186.5
97.5°	184.9
100°	183.0
102.5°	181.0
105°	178.6
107.5°	175.9
110°	173.0



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	170.0
115°	166.8
117.5°	163.4
120°	159.9
122.5°	156.0
125°	152.2
127.5°	148.3
130°	144.7
132.5°	140.9
135°	137.2
137.5°	133.5
140°	129.7
142.5°	126.1
145°	122.4
147.5°	119.1
150°	115.8
152.5°	112.2
155°	107.7
157.5°	103.4
160°	99.0
162.5°	93.9
165°	88.6
167.5°	82.0
170°	73.6
172.5°	63.2
175°	54.1
177.5°	50.4
180°	53.6

(END OF REPORT)