

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: 19436A

Luminaire Tested: **447-CF4/32**

Issue Date: 3/3/2020

**Test Information**

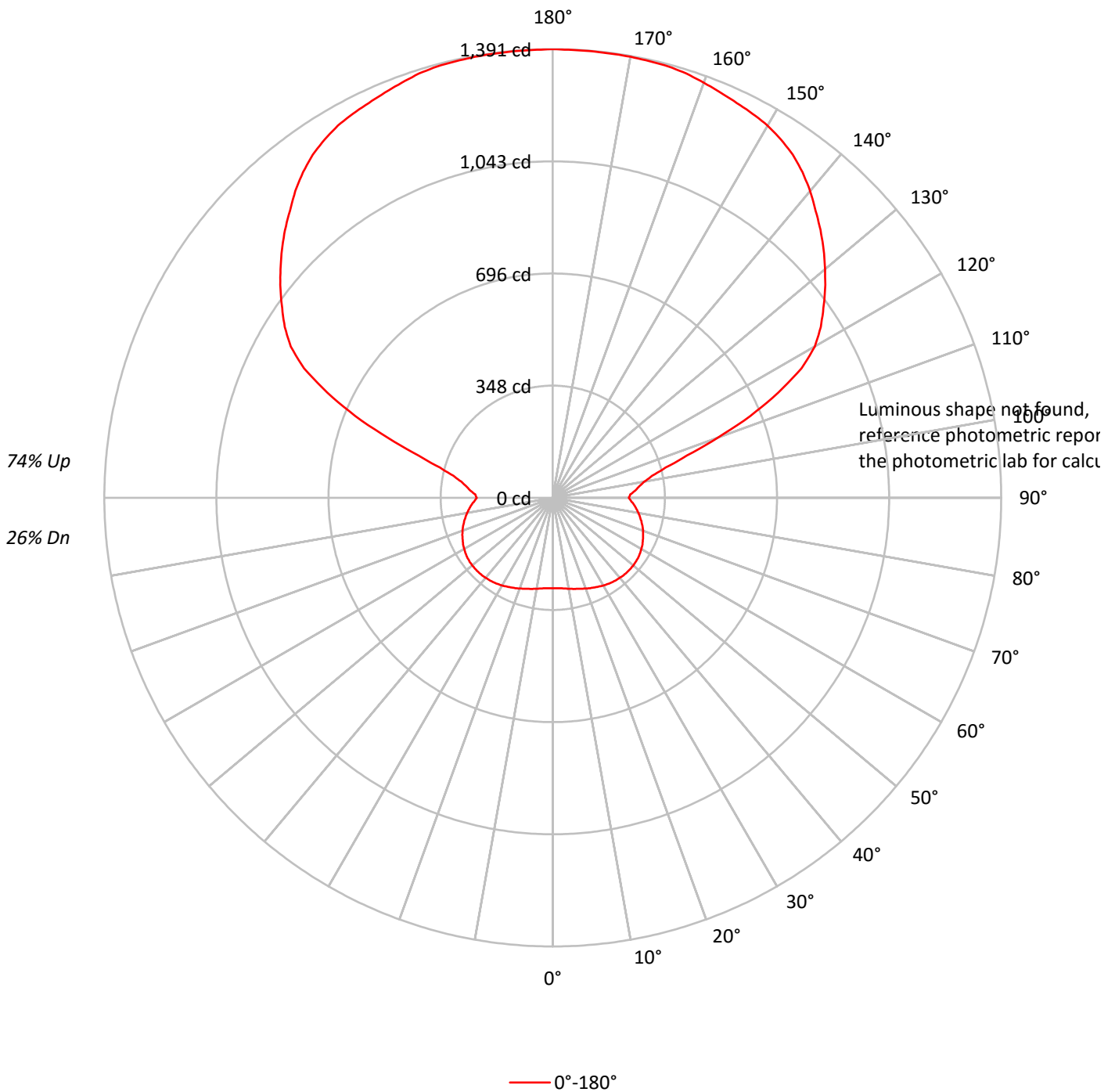
Test Method: LM-66-11  
Report Number: 19436A  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 447-CF4/32  
Description: INTERIOR SUSPENDED LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC BOWL LENS  
Light Source: FOUR 32 WATT CPFL LAMPS. LUMEN RATING = 9600 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 9600 (1 lamp)  
Luminaire Lumens: 7099.9 lumens  
Efficiency: 74.0%  
Efficacy: -  
Spacing Criteria (0/90/45): 1.73 / 1.73 / 1.88  
Luminous Opening: (L: 0 ' x W: -0.08 ' x H: 1.25 '  
CIE Type: Semi-Indirect  
  
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



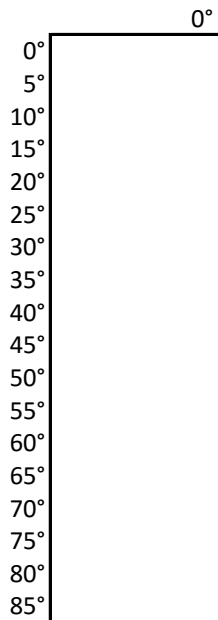


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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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	75	75	75	75	67	67	67	67	52	52	52	38	38	38	26	26	26	20
1	67	63	60	57	59	56	53	51	43	41	39	31	30	29	20	19	19	14
2	60	54	49	45	53	48	44	41	37	34	32	27	25	23	17	16	15	10
3	55	47	42	37	48	42	37	33	32	29	26	23	21	19	15	13	12	8
4	50	41	35	31	44	37	32	28	28	24	21	20	18	15	13	11	10	6
5	45	37	30	26	40	33	27	23	25	21	18	18	15	13	11	10	8	5
6	42	33	26	22	37	29	24	20	22	18	15	16	13	11	10	8	7	4
7	38	29	23	19	34	26	21	17	20	16	13	14	12	10	9	7	6	4
8	35	26	21	17	31	23	18	15	18	14	12	13	10	8	8	7	5	3
9	33	24	18	15	29	21	16	13	16	13	10	12	9	7	8	6	5	3
10	31	22	16	13	27	19	15	12	15	11	9	11	8	7	7	5	4	3

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





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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	27.0	0.4	0.3
10°-20°	83.1	1.2	0.9
20°-30°	142.1	2.0	1.5
30°-40°	200.8	2.8	2.1
40°-50°	252.2	3.6	2.6
50°-60°	289.5	4.1	3.0
60°-70°	305.9	4.3	3.2
70°-80°	300.7	4.2	3.1
80°-90°	275.8	3.9	2.9
90°-100°	280.9	4.0	2.9
100°-110°	403.8	5.7	4.2
110°-120°	753.2	10.6	7.8
120°-130°	917.2	12.9	9.6
130°-140°	907.1	12.8	9.4
140°-150°	811.6	11.4	8.5
150°-160°	624.8	8.8	6.5
160°-170°	391.6	5.5	4.1
170°-180°	132.6	1.9	1.4
0°-30°	252.2	3.6	2.6
0°-40°	453.0	6.4	4.7
0°-60°	994.7	14.0	10.4
0°-90°	1877.1	26.4	19.6
90°-120°	1437.8	20.3	15.0
90°-150°	4073.8	57.4	42.4
90°-180°	5223.0	73.6	54.4
0°-180°	7099.9	100.0	74.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	281	
5°	281	27
15°	292	83
25°	306	142
35°	320	201
45°	326	252
55°	323	289
65°	308	306
75°	285	301
85°	253	210
90°	236	131
95°	257	216
105°	362	404
115°	771	753
125°	1025	917
135°	1174	907
145°	1298	812
155°	1351	625
165°	1385	392
175°	1390	133
180°	1391	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	280.7
2.5°	280.5
5°	281.4
7.5°	283.6
10°	286.2
12.5°	289.2
15°	292.2
17.5°	295.4
20°	299.3
22.5°	303.1
25°	306.5
27.5°	310.2
30°	313.9
32.5°	317.0
35°	319.8
37.5°	322.2
40°	323.8
42.5°	325.4
45°	326.0
47.5°	326.2
50°	326.1
52.5°	325.0
55°	323.4
57.5°	320.7
60°	317.4
62.5°	313.5
65°	308.4
67.5°	303.5
70°	297.9
72.5°	291.6
75°	284.7
77.5°	277.3
80°	269.8
82.5°	261.6
85°	253.0
87.5°	243.9
90°	235.9
92.5°	240.8
95°	257.2
97.5°	269.8
100°	288.5
102.5°	315.7
105°	362.5
107.5°	436.5
110°	543.1



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	663.3
115°	771.4
117.5°	869.6
120°	938.8
122.5°	985.5
125°	1024.8
127.5°	1064.9
130°	1102.2
132.5°	1139.3
135°	1174.3
137.5°	1207.0
140°	1242.1
142.5°	1272.1
145°	1298.4
147.5°	1317.2
150°	1332.7
152.5°	1342.2
155°	1350.6
157.5°	1359.7
160°	1369.6
162.5°	1379.1
165°	1384.8
167.5°	1386.6
170°	1388.4
172.5°	1389.0
175°	1389.8
177.5°	1389.6
180°	1391.0

(END OF REPORT)