

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: 18089

Luminaire Tested: **470**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 18089
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 470
Description: FLUORESCENT SUSPENDED LUMINAIRE WITH WHITE INTERIOR AND WHITE
PLASTIC LENS
Light Source: TWO SYLVANIA 40 WATT CPFL LAMPS

FT40DL/830. LUMEN RATING = 6300 LMS.

Ballast/Driver: -

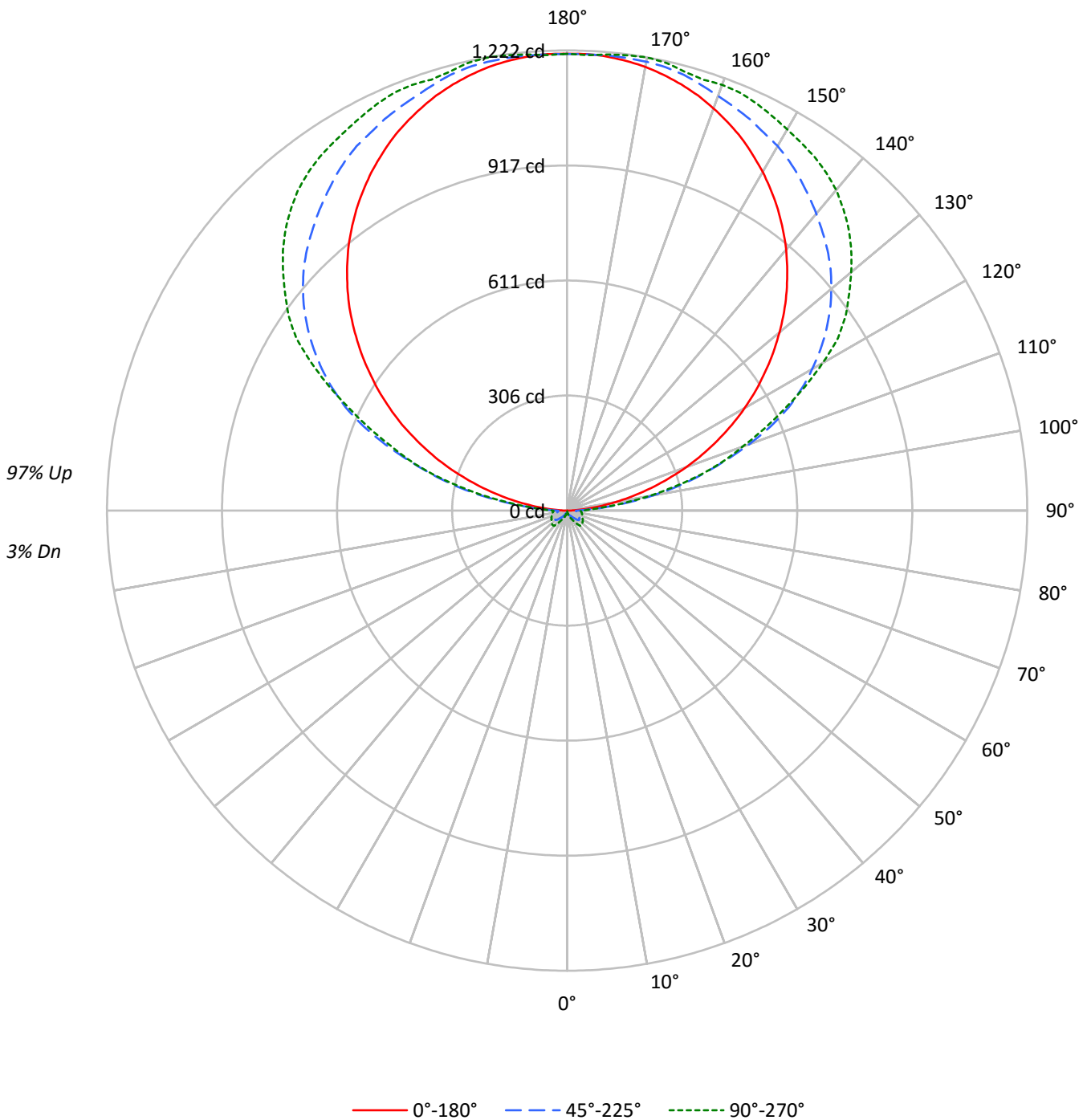
Summary

Lumens per Lamp: 6300 (1 lamp)
Luminaire Lumens: 4335.4 lumens
Efficiency: 68.8%
Efficacy: 54.9 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 10.65 / 8.43
Luminous Opening: (L: 0' x W: -2' x H: 0.09'
CIE Type: Indirect

Input Watts (W): 79
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														
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10											
RCR																															
0	66	66	66	66	57	57	57	57	40	40	40	24	24	24	9	9	9	2													
1	60	57	54	52	51	49	47	45	34	33	32	20	20	19	8	8	7	2													
2	54	50	46	42	47	43	39	37	30	28	26	18	17	16	7	6	6	1													
3	49	43	39	35	42	37	34	30	26	24	22	16	14	13	6	5	5	1													
4	45	38	33	29	39	33	29	26	23	20	18	14	12	11	5	5	4	1													
5	41	34	29	25	35	29	25	22	20	18	15	12	11	9	4	4	3	0													
6	38	30	25	21	32	26	22	18	18	15	13	11	9	8	4	3	3	0													
7	35	27	22	18	30	23	19	16	16	13	11	10	8	7	4	3	3	0													
8	32	24	19	16	27	21	17	14	15	12	10	9	7	6	3	3	2	0													
9	30	22	17	14	25	19	15	12	13	11	9	8	6	5	3	2	2	0													
10	28	20	15	12	24	17	13	11	12	9	8	7	6	5	3	2	2	0													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.1	0.0	0.0
10°-20°	1.5	0.0	0.0
20°-30°	5.3	0.1	0.1
30°-40°	12.5	0.3	0.2
40°-50°	22.8	0.5	0.4
50°-60°	28.0	0.6	0.4
60°-70°	29.3	0.7	0.5
70°-80°	27.4	0.6	0.4
80°-90°	24.5	0.6	0.4
90°-100°	111.8	2.6	1.8
100°-110°	365.9	8.4	5.8
110°-120°	590.5	13.6	9.4
120°-130°	721.7	16.6	11.5
130°-140°	741.6	17.1	11.8
140°-150°	669.9	15.5	10.6
150°-160°	529.2	12.2	8.4
160°-170°	337.6	7.8	5.4
170°-180°	115.7	2.7	1.8
0°-30°	7.0	0.2	0.1
0°-40°	19.5	0.5	0.3
0°-60°	70.3	1.6	1.1
0°-90°	151.5	3.5	2.4
90°-120°	1068.2	24.6	17.0
90°-150°	3201.4	73.8	50.8
90°-180°	4184.0	96.5	66.4
0°-180°	4335.4	100.0	68.8

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	1	1	0
15°	0	1	5	9	10	0
25°	0	3	12	19	22	0
35°	0	6	20	32	39	0
45°	0	9	31	50	54	0
55°	0	13	39	48	50	0
65°	0	19	34	43	46	0
75°	0	15	30	38	42	1
85°	0	11	24	34	38	0
90°	1	13	25	34	38	3
95°	49	106	100	95	93	57
105°	230	358	371	373	366	243
115°	441	559	649	645	636	436
125°	642	730	841	889	903	574
135°	824	885	978	1043	1057	635
145°	976	1013	1077	1126	1146	610
155°	1093	1118	1147	1182	1192	504
165°	1172	1184	1198	1205	1206	331
175°	1210	1212	1213	1216	1216	115
180°	1213	1213	1213	1213	1213	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	0.5	0.5	0.5	0.5	0.5
2.5°	0.5	0.5	0.5	0.5	0.5
5°	0.5	0.5	0.5	0.8	1.0
7.5°	0.5	0.5	1.2	2.5	2.8
10°	0.5	0.8	2.1	4.1	5.1
12.5°	0.5	0.8	3.5	6.4	7.6
15°	0.5	1.2	4.8	9.1	10.3
17.5°	0.5	1.4	6.4	11.3	13.0
20°	0.5	2.1	8.0	14.0	16.0
22.5°	0.5	2.5	10.1	16.7	19.0
25°	0.5	3.1	12.0	18.8	21.9
27.5°	0.5	3.7	13.6	21.5	24.9
30°	0.5	4.4	15.6	24.8	28.7
32.5°	0.5	5.1	17.2	28.1	33.1
35°	0.5	6.0	19.5	32.5	38.8
37.5°	0.5	6.8	21.8	37.7	46.5
40°	0.5	7.6	24.2	44.9	52.8
42.5°	0.5	8.5	27.2	49.4	54.4
45°	0.5	9.4	30.8	50.5	54.4
47.5°	0.5	9.9	35.7	50.5	54.2
50°	0.5	10.7	39.3	49.8	52.8
52.5°	0.5	12.1	39.7	48.8	51.5
55°	0.5	12.6	39.3	48.0	50.5
57.5°	0.5	13.6	38.4	46.6	49.2
60°	0.5	14.9	37.4	45.3	48.0
62.5°	0.5	17.4	35.7	43.9	46.9
65°	0.5	18.6	34.3	42.6	45.9
67.5°	0.5	18.8	33.0	41.6	44.6
70°	0.5	17.9	32.2	40.3	43.6
72.5°	0.5	16.7	30.8	38.9	42.6
75°	0.5	15.1	29.5	38.1	41.6
77.5°	0.5	14.0	28.1	37.0	40.3
80°	0.5	12.9	26.8	36.0	39.7
82.5°	0.5	12.0	25.8	35.4	38.9
85°	0.5	11.0	24.5	34.1	37.7
87.5°	0.5	9.7	23.1	32.2	36.0
90°	0.8	12.6	25.4	34.3	38.2
92.5°	17.9	47.6	49.8	56.5	59.0
95°	48.6	105.8	100.1	94.6	93.3
97.5°	86.0	167.4	161.5	155.1	150.6
100°	130.5	232.5	232.1	224.3	219.4
102.5°	177.9	297.4	303.3	294.4	288.1
105°	229.8	357.9	371.1	373.0	366.4
107.5°	281.6	410.5	438.5	433.0	434.6
110°	336.2	463.6	513.6	503.1	495.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	388.2	513.0	585.6	571.9	565.0
115°	440.6	558.8	649.3	645.2	635.5
117.5°	493.8	603.8	702.9	721.4	711.8
120°	544.0	645.3	751.6	790.1	783.9
122.5°	594.2	688.4	798.4	846.6	853.0
125°	642.0	729.5	840.8	888.8	903.1
127.5°	690.4	771.7	880.6	933.7	943.6
130°	735.8	811.4	915.9	972.1	984.7
132.5°	781.6	850.9	949.4	1011.0	1023.5
135°	824.3	885.2	977.7	1042.7	1057.4
137.5°	865.2	918.2	1003.8	1069.6	1085.9
140°	905.0	953.7	1029.4	1092.7	1111.4
142.5°	941.1	985.4	1053.4	1110.7	1130.7
145°	976.1	1013.3	1077.4	1126.5	1145.9
147.5°	1008.0	1039.6	1099.1	1141.1	1157.5
150°	1038.6	1067.2	1117.9	1156.0	1169.0
152.5°	1066.3	1092.9	1131.1	1170.6	1180.4
155°	1092.9	1117.6	1146.9	1182.5	1192.3
157.5°	1116.0	1138.4	1159.8	1189.3	1200.9
160°	1136.6	1155.8	1171.5	1192.6	1203.2
162.5°	1155.8	1171.3	1185.0	1195.9	1199.9
165°	1171.7	1183.5	1198.0	1205.4	1206.2
167.5°	1185.0	1193.7	1206.2	1214.7	1217.7
170°	1196.4	1201.9	1210.5	1219.3	1221.7
172.5°	1204.4	1208.2	1212.4	1219.0	1219.7
175°	1210.4	1212.4	1213.1	1216.0	1215.6
177.5°	1213.6	1214.7	1212.7	1213.3	1210.5
180°	1212.8	1212.8	1212.8	1212.8	1212.8

(END OF REPORT)