

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: 20058A

Luminaire Tested: **687/4-9-CF1/13**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20058A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 687/4-9-CF1/13
Description: INTERIOR WALL MOUNT LUMINAIRE WHITE BACK AND METAL FRONT INTERIOR
WITH NO LENS
Light Source: ONE 13 WATT CPFL LAMP. LUMEN RATING = 900 LMS.

Ballast/Driver: -

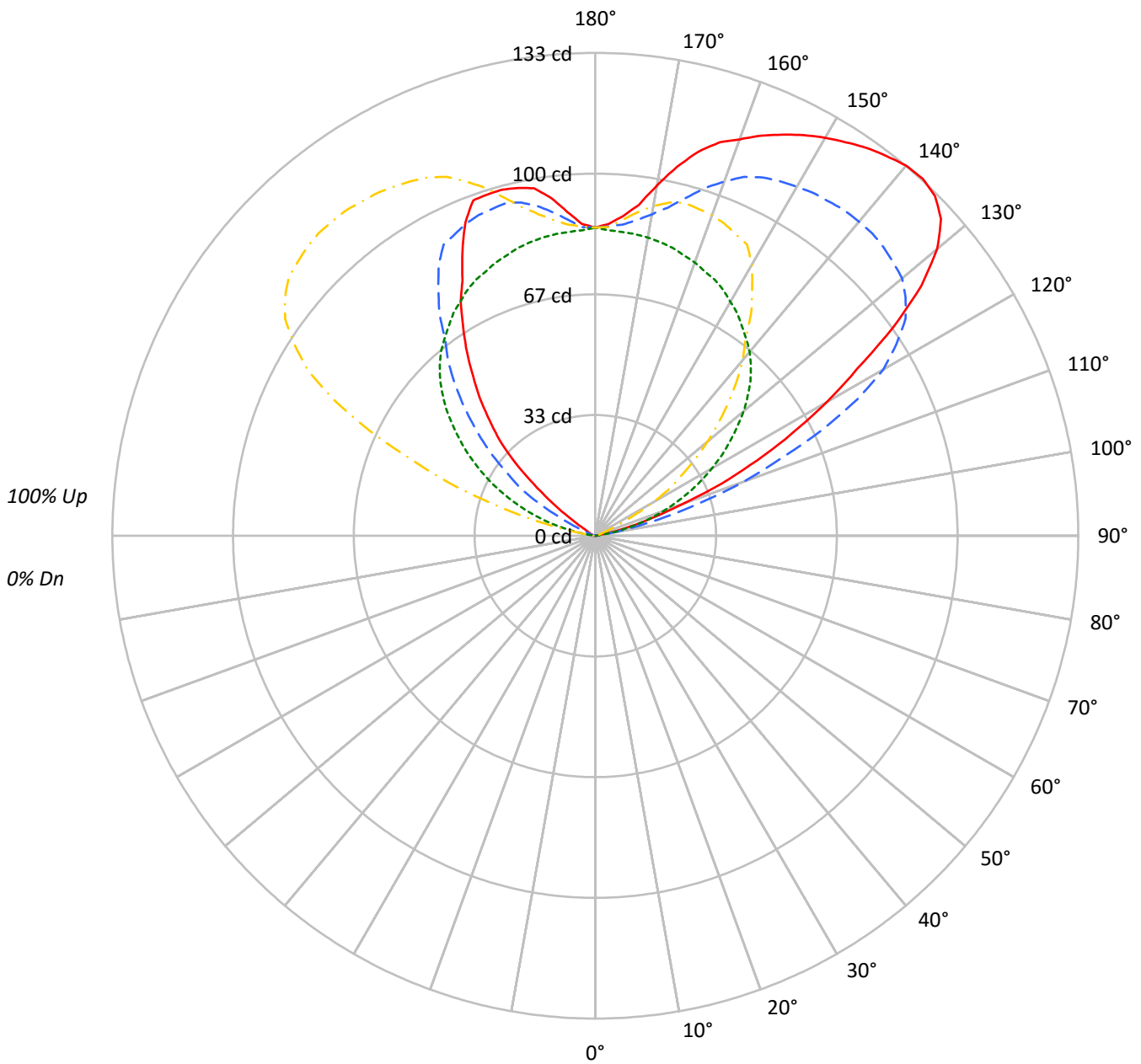
Summary

Lumens per Lamp: 900 (1 lamp)
Luminaire Lumens: 292.9 lumens
Efficiency: 32.5%
Efficacy: -
N/A
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: 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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CATALOG NUMBER: 687/4-9-CF1/13

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° ··· 90°-270° - · 135°-315°



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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	20			
RCR																					
0	31	31	31	31	26	26	26	26	18	18	18	18	10	10	10	10	3	3	3	3	0
1	28	27	26	25	24	23	22	21	16	15	15	15	9	9	9	9	3	3	3	3	0
2	26	23	22	20	22	20	19	17	14	13	12	12	8	7	7	7	3	2	2	2	0
3	23	21	18	17	20	18	16	14	12	11	10	10	7	6	6	6	2	2	2	2	0
4	21	18	16	14	18	16	14	12	11	9	9	9	6	6	5	5	2	2	2	2	0
5	19	16	14	12	17	14	12	10	9	8	7	7	5	5	4	4	2	2	1	1	0
6	18	14	12	10	15	12	10	9	8	7	6	6	5	4	4	4	2	1	1	1	0
7	16	13	10	9	14	11	9	8	8	6	5	5	4	4	3	3	1	1	1	1	0
8	15	11	9	8	13	10	8	7	7	6	5	5	4	3	3	3	1	1	1	1	0
9	14	10	8	7	12	9	7	6	6	5	4	4	4	3	2	2	1	1	1	1	0
10	13	9	7	6	11	8	6	5	6	4	4	4	3	3	2	2	1	1	1	1	0

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
95°	Luminaire represents a point source (luminous area is zero).			
100°	No luminance values can be calculated.			
105°				
110°				
115°				
120°				
125°				
130°				
135°				
140°				
145°				
150°				
155°				
160°				
165°				
170°				
175°				



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 CATALOG NUMBER: 687/4-9-CF1/13

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.0	0.0	0.0
20°-30°	0.0	0.0	0.0
30°-40°	0.0	0.0	0.0
40°-50°	0.0	0.0	0.0
50°-60°	0.0	0.0	0.0
60°-70°	0.0	0.0	0.0
70°-80°	0.0	0.0	0.0
80°-90°	0.0	0.0	0.0
90°-100°	0.7	0.2	0.1
100°-110°	10.9	3.7	1.2
110°-120°	32.8	11.2	3.6
120°-130°	52.8	18.0	5.9
130°-140°	60.7	20.7	6.7
140°-150°	55.8	19.0	6.2
150°-160°	44.1	15.1	4.9
160°-170°	26.8	9.1	3.0
170°-180°	8.4	2.9	0.9
0°-30°	0.0	0.0	0.0
0°-40°	0.0	0.0	0.0
0°-60°	0.0	0.0	0.0
0°-90°	0.0	0.0	0.0
90°-120°	44.4	15.2	4.9
90°-150°	213.6	72.9	23.7
90°-180°	293.0	100.0	32.6
0°-180°	292.9	100.0	32.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
90°	0	0	0	0	0	
95°	1	0	0	0	1	1
105°	10	12	1	12	10	12
115°	49	28	2	28	49	49
125°	100	45	9	45	100	89
135°	132	60	37	60	132	101
145°	130	70	62	70	130	82
155°	122	78	87	78	122	56
165°	110	82	99	82	110	31
175°	88	84	90	84	88	9
180°	85	85	85	85	85	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.1	0.2	0.3	0.2	0.3	0.1	0.4	0.5	0.3	0.5	0.4
95°	0.6	0.6	0.6	0.5	0.3	0.2	0.6	0.5	0.2	0.5	0.6
97.5°	0.7	0.6	1.4	1.2	1.0	0.3	0.3	0.6	0.4	0.6	0.3
100°	1.5	2.6	4.5	5.0	3.7	0.4	0.6	0.8	0.4	0.8	0.6
102.5°	5.2	6.8	10.4	11.7	7.1	2.6	0.7	0.5	0.7	0.5	0.7
105°	10.2	12.9	19.8	20.2	11.5	6.5	0.8	0.8	0.6	0.8	0.8
107.5°	16.8	20.8	30.8	29.2	15.6	11.5	1.4	1.0	1.0	1.0	1.4
110°	25.5	32.8	43.3	37.2	20.0	16.0	1.8	1.0	1.2	1.0	1.8
112.5°	37.7	44.8	54.6	44.2	24.2	20.5	2.9	1.8	1.6	1.8	2.9
115°	49.1	57.1	68.6	50.9	28.5	25.9	6.4	2.0	1.7	2.0	6.4
117.5°	61.2	69.6	81.3	56.8	32.9	31.3	11.5	2.6	2.1	2.6	11.5
120°	73.5	81.6	91.5	62.2	37.0	36.4	17.9	4.0	2.6	4.0	17.9
122.5°	85.4	96.7	98.3	66.9	41.3	41.8	24.5	8.4	4.3	8.4	24.5
125°	100.1	109.2	104.3	71.0	45.2	47.1	29.0	14.3	9.0	14.3	29.0
127.5°	113.2	119.0	107.7	74.8	49.2	53.3	34.7	21.2	15.0	21.2	34.7
130°	122.9	124.6	110.3	78.6	53.3	58.4	40.3	28.9	22.0	28.9	40.3
132.5°	129.1	127.9	111.3	82.0	56.9	63.9	45.9	35.3	30.4	35.3	45.9
135°	132.3	129.4	112.3	85.2	60.4	67.7	51.8	40.6	37.2	40.6	51.8
137.5°	133.4	129.6	112.9	87.5	63.4	70.9	57.5	46.7	43.0	46.7	57.5
140°	133.1	128.5	112.9	88.6	66.1	73.5	63.1	52.9	49.5	52.9	63.1
142.5°	131.8	127.8	112.9	89.1	68.3	76.3	67.8	58.8	55.2	58.8	67.8
145°	130.4	126.5	112.3	89.2	70.4	79.0	74.8	64.9	61.6	64.9	74.8
147.5°	128.5	125.5	111.9	88.8	72.7	81.1	80.4	70.8	67.6	70.8	80.4
150°	126.6	123.6	111.0	88.2	74.4	83.7	86.2	76.5	74.1	76.5	86.2
152.5°	124.4	121.2	110.1	88.0	76.3	85.1	90.4	83.7	79.2	83.7	90.4
155°	121.9	118.7	108.9	87.5	77.8	86.8	91.6	90.5	86.6	90.5	91.6
157.5°	119.3	116.7	107.0	86.7	78.8	87.7	93.0	95.4	93.5	95.4	93.0
160°	116.2	113.9	103.8	86.6	80.1	88.2	94.0	97.3	98.3	97.3	94.0
162.5°	113.6	111.2	100.4	86.3	81.0	88.2	94.4	97.8	98.6	97.8	94.4
165°	109.5	106.3	96.3	85.7	82.1	88.2	94.9	97.7	98.7	97.7	94.9
167.5°	104.1	101.0	92.6	85.7	82.8	87.8	94.0	97.8	98.1	97.8	94.0
170°	98.0	95.6	89.9	85.4	83.4	87.3	92.2	95.9	97.2	95.9	92.2
172.5°	91.9	90.5	87.7	84.7	83.8	86.7	89.9	93.2	93.9	93.2	89.9
175°	88.4	87.8	86.0	84.7	84.0	85.9	87.4	89.4	89.6	89.4	87.4
177.5°	86.0	85.9	85.3	84.4	84.2	85.6	85.1	86.0	86.0	86.0	85.1
180°	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9



TEST NUMBER: 20058A

CATALOG NUMBER: 687/4-9-CF1/13

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.1	0.3	0.2	0.3	0.2	0.1
95°	0.2	0.3	0.5	0.6	0.6	0.6
97.5°	0.3	1.0	1.2	1.4	0.6	0.7
100°	0.4	3.7	5.0	4.5	2.6	1.5
102.5°	2.6	7.1	11.7	10.4	6.8	5.2
105°	6.5	11.5	20.2	19.8	12.9	10.2
107.5°	11.5	15.6	29.2	30.8	20.8	16.8
110°	16.0	20.0	37.2	43.3	32.8	25.5
112.5°	20.5	24.2	44.2	54.6	44.8	37.7
115°	25.9	28.5	50.9	68.6	57.1	49.1
117.5°	31.3	32.9	56.8	81.3	69.6	61.2
120°	36.4	37.0	62.2	91.5	81.6	73.5
122.5°	41.8	41.3	66.9	98.3	96.7	85.4
125°	47.1	45.2	71.0	104.3	109.2	100.1
127.5°	53.3	49.2	74.8	107.7	119.0	113.2
130°	58.4	53.3	78.6	110.3	124.6	122.9
132.5°	63.9	56.9	82.0	111.3	127.9	129.1
135°	67.7	60.4	85.2	112.3	129.4	132.3
137.5°	70.9	63.4	87.5	112.9	129.6	133.4
140°	73.5	66.1	88.6	112.9	128.5	133.1
142.5°	76.3	68.3	89.1	112.9	127.8	131.8
145°	79.0	70.4	89.2	112.3	126.5	130.4
147.5°	81.1	72.7	88.8	111.9	125.5	128.5
150°	83.7	74.4	88.2	111.0	123.6	126.6
152.5°	85.1	76.3	88.0	110.1	121.2	124.4
155°	86.8	77.8	87.5	108.9	118.7	121.9
157.5°	87.7	78.8	86.7	107.0	116.7	119.3
160°	88.2	80.1	86.6	103.8	113.9	116.2
162.5°	88.2	81.0	86.3	100.4	111.2	113.6
165°	88.2	82.1	85.7	96.3	106.3	109.5
167.5°	87.8	82.8	85.7	92.6	101.0	104.1
170°	87.3	83.4	85.4	89.9	95.6	98.0
172.5°	86.7	83.8	84.7	87.7	90.5	91.9
175°	85.9	84.0	84.7	86.0	87.8	88.4
177.5°	85.6	84.2	84.4	85.3	85.9	86.0
180°	84.9	84.9	84.9	84.9	84.9	84.9

(END OF REPORT)