

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: 20058

Luminaire Tested: **687/4-9-CF1/26**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20058
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 687/4-9-CF1/26
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE BACK AND METAL FRONT
INTERIOR
WITH NO LENS
Light Source: ONE SYLVANIA 26 WATT CPFL LAMP

CF26DD/E/841. LUMEN RATING = 1800 LMS.

Ballast/Driver: -

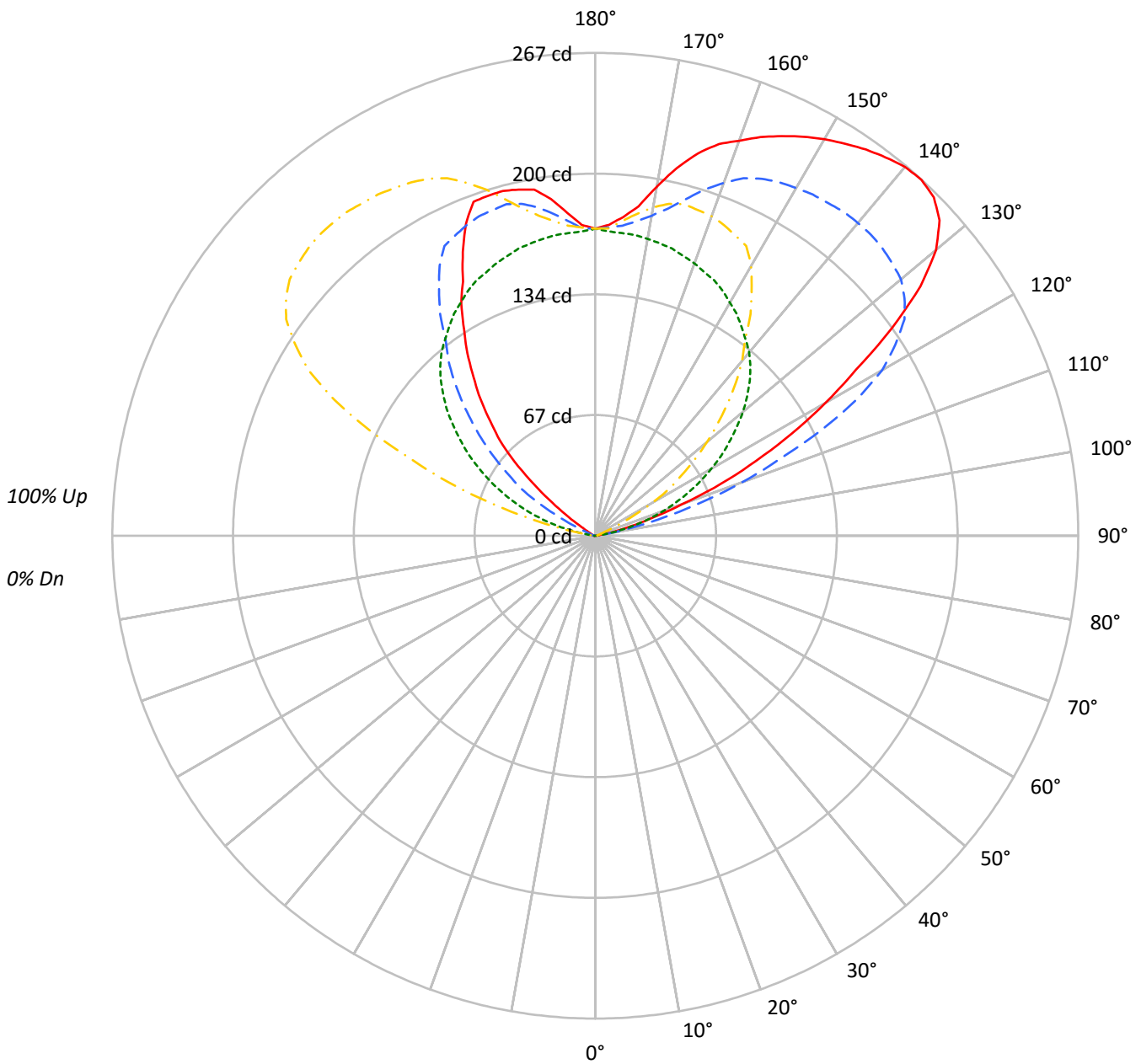
Summary

Lumens per Lamp: 1800 (1 lamp)
Luminaire Lumens: 585.8 lumens
Efficiency: 32.5%
Efficacy: 25.5 lumens/watt
N/A
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Indirect

Input Watts (W): 23
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



— 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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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°	1.4	0.2	0.1
100°-110°	21.8	3.7	1.2
110°-120°	65.6	11.2	3.6
120°-130°	105.5	18.0	5.9
130°-140°	121.4	20.7	6.7
140°-150°	111.6	19.0	6.2
150°-160°	88.2	15.1	4.9
160°-170°	53.5	9.1	3.0
170°-180°	16.8	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°	88.8	15.2	4.9
90°-150°	427.3	72.9	23.7
90°-180°	586.0	100.0	32.6
0°-180°	585.8	100.0	32.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
90°	0	0	0	0	0	
95°	1	1	0	1	1	1
105°	20	23	1	23	20	24
115°	98	57	3	57	98	97
125°	200	90	18	90	200	177
135°	265	121	74	121	265	202
145°	261	141	123	141	261	164
155°	244	156	173	156	244	113
165°	219	164	197	164	219	62
175°	177	168	179	168	177	17
180°	170	170	170	170	170	



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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	0.3	0.5	0.3	0.6	0.1	0.8	0.9	0.7	0.9	0.8
95°	1.2	1.1	1.1	1.0	0.6	0.4	1.1	1.0	0.4	1.0	1.1
97.5°	1.3	1.3	2.7	2.4	2.0	0.7	0.6	1.3	0.9	1.3	0.6
100°	3.0	5.1	9.0	10.1	7.4	0.9	1.2	1.5	0.8	1.5	1.2
102.5°	10.4	13.6	20.7	23.3	14.1	5.1	1.3	0.9	1.4	0.9	1.3
105°	20.5	25.8	39.6	40.5	22.9	13.1	1.5	1.5	1.2	1.5	1.5
107.5°	33.6	41.6	61.5	58.3	31.3	22.9	2.9	2.0	2.1	2.0	2.9
110°	51.0	65.7	86.6	74.5	40.1	32.0	3.5	2.1	2.4	2.1	3.5
112.5°	75.5	89.6	109.2	88.5	48.5	41.0	5.7	3.6	3.2	3.6	5.7
115°	98.2	114.2	137.2	101.7	57.0	51.7	12.9	4.0	3.3	4.0	12.9
117.5°	122.4	139.1	162.6	113.7	65.7	62.6	23.0	5.3	4.1	5.3	23.0
120°	147.0	163.2	183.0	124.3	74.0	72.8	35.9	8.1	5.3	8.1	35.9
122.5°	170.8	193.4	196.7	133.7	82.6	83.6	49.0	16.9	8.7	16.9	49.0
125°	200.3	218.5	208.6	142.0	90.4	94.2	58.0	28.6	18.0	28.6	58.0
127.5°	226.5	238.0	215.5	149.5	98.4	106.6	69.3	42.3	30.0	42.3	69.3
130°	245.8	249.1	220.6	157.2	106.6	116.8	80.7	57.9	44.1	57.9	80.7
132.5°	258.1	255.9	222.7	164.1	113.7	127.9	91.8	70.5	60.8	70.5	91.8
135°	264.6	258.8	224.6	170.4	120.7	135.4	103.5	81.2	74.5	81.2	103.5
137.5°	266.9	259.1	225.7	175.0	126.9	141.9	115.0	93.3	85.9	93.3	115.0
140°	266.3	257.1	225.8	177.3	132.3	147.1	126.2	105.9	99.0	105.9	126.2
142.5°	263.7	255.6	225.7	178.3	136.6	152.7	135.7	117.5	110.5	117.5	135.7
145°	260.7	253.1	224.5	178.5	140.9	158.0	149.5	129.9	123.2	129.9	149.5
147.5°	257.0	250.9	223.7	177.5	145.4	162.3	160.8	141.6	135.1	141.6	160.8
150°	253.2	247.3	222.0	176.4	148.8	167.4	172.3	153.0	148.2	153.0	172.3
152.5°	248.8	242.4	220.3	176.0	152.6	170.2	180.7	167.4	158.5	167.4	180.7
155°	243.8	237.4	217.8	174.9	155.7	173.7	183.2	181.1	173.2	181.1	183.2
157.5°	238.6	233.4	214.0	173.3	157.6	175.4	185.9	190.7	186.9	190.7	185.9
160°	232.4	227.8	207.6	173.2	160.3	176.4	188.0	194.6	196.6	194.6	188.0
162.5°	227.1	222.4	200.7	172.6	162.1	176.4	188.8	195.7	197.1	195.7	188.8
165°	218.9	212.6	192.6	171.3	164.3	176.4	189.8	195.3	197.4	195.3	189.8
167.5°	208.2	202.1	185.2	171.3	165.5	175.6	188.0	195.6	196.1	195.6	188.0
170°	196.0	191.2	179.7	170.7	166.7	174.7	184.4	191.8	194.3	191.8	184.4
172.5°	183.8	181.1	175.4	169.4	167.7	173.3	179.7	186.3	187.8	186.3	179.7
175°	176.8	175.7	172.1	169.3	168.0	171.8	174.8	178.8	179.3	178.8	174.8
177.5°	172.1	171.8	170.6	168.7	168.4	171.1	170.1	172.0	172.0	172.0	170.1
180°	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8



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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	0.6	0.3	0.5	0.3	0.1
95°	0.4	0.6	1.0	1.1	1.1	1.2
97.5°	0.7	2.0	2.4	2.7	1.3	1.3
100°	0.9	7.4	10.1	9.0	5.1	3.0
102.5°	5.1	14.1	23.3	20.7	13.6	10.4
105°	13.1	22.9	40.5	39.6	25.8	20.5
107.5°	22.9	31.3	58.3	61.5	41.6	33.6
110°	32.0	40.1	74.5	86.6	65.7	51.0
112.5°	41.0	48.5	88.5	109.2	89.6	75.5
115°	51.7	57.0	101.7	137.2	114.2	98.2
117.5°	62.6	65.7	113.7	162.6	139.1	122.4
120°	72.8	74.0	124.3	183.0	163.2	147.0
122.5°	83.6	82.6	133.7	196.7	193.4	170.8
125°	94.2	90.4	142.0	208.6	218.5	200.3
127.5°	106.6	98.4	149.5	215.5	238.0	226.5
130°	116.8	106.6	157.2	220.6	249.1	245.8
132.5°	127.9	113.7	164.1	222.7	255.9	258.1
135°	135.4	120.7	170.4	224.6	258.8	264.6
137.5°	141.9	126.9	175.0	225.7	259.1	266.9
140°	147.1	132.3	177.3	225.8	257.1	266.3
142.5°	152.7	136.6	178.3	225.7	255.6	263.7
145°	158.0	140.9	178.5	224.5	253.1	260.7
147.5°	162.3	145.4	177.5	223.7	250.9	257.0
150°	167.4	148.8	176.4	222.0	247.3	253.2
152.5°	170.2	152.6	176.0	220.3	242.4	248.8
155°	173.7	155.7	174.9	217.8	237.4	243.8
157.5°	175.4	157.6	173.3	214.0	233.4	238.6
160°	176.4	160.3	173.2	207.6	227.8	232.4
162.5°	176.4	162.1	172.6	200.7	222.4	227.1
165°	176.4	164.3	171.3	192.6	212.6	218.9
167.5°	175.6	165.5	171.3	185.2	202.1	208.2
170°	174.7	166.7	170.7	179.7	191.2	196.0
172.5°	173.3	167.7	169.4	175.4	181.1	183.8
175°	171.8	168.0	169.3	172.1	175.7	176.8
177.5°	171.1	168.4	168.7	170.6	171.8	172.1
180°	169.8	169.8	169.8	169.8	169.8	169.8

(END OF REPORT)