

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: 20059

Luminaire Tested: **688-CF2/26**

Issue Date: 3/3/2020

**Test Information**

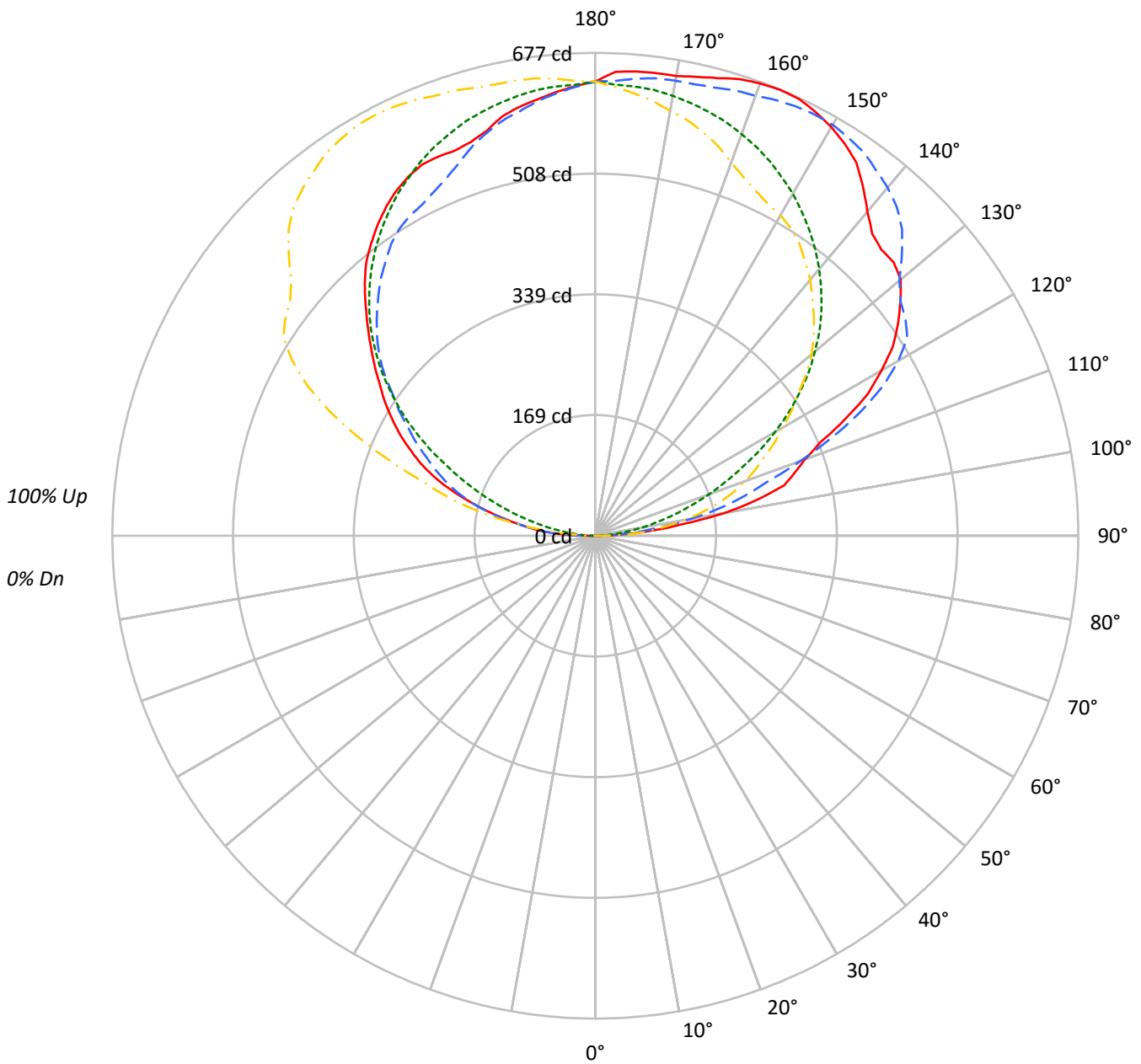
Test Method: LM-66-11  
Report Number: 20059  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 688-CF2/26  
Description: WITH WHITE INTERIOR AND NO LENS  
  
Light Source: TWO 26 WATT CPFL LAMPS  
  
CF26DT/E/827. LUMEN RATING = 3600 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 3600 (1 lamp)  
Luminaire Lumens: 2218.4 lumens  
Efficiency: 61.6%  
Efficacy: 46.2 lumens/watt  
N/A  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Indirect  
  
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	59	59	59	59	50	50	50	50	34	34	34	20	20	20	6	6	6	0
1	53	51	49	47	46	44	42	40	30	29	28	17	17	16	5	5	5	0
2	49	44	41	38	41	38	35	33	26	24	23	15	14	13	5	5	4	0
3	44	39	35	32	38	33	30	27	23	21	19	13	12	11	4	4	4	0
4	40	34	30	26	34	29	26	23	20	18	16	12	11	10	4	3	3	0
5	37	30	26	22	31	26	22	19	18	16	14	10	9	8	3	3	3	0
6	34	27	22	19	29	23	19	17	16	14	12	9	8	7	3	3	2	0
7	31	24	20	17	26	21	17	14	14	12	10	8	7	6	3	2	2	0
8	29	22	17	14	24	19	15	13	13	11	9	8	6	5	2	2	2	0
9	27	20	15	13	23	17	13	11	12	9	8	7	6	5	2	2	2	0
10	25	18	14	11	21	15	12	10	11	8	7	6	5	4	2	2	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°	66.5	3.0	1.8
100°-110°	201.6	9.1	5.6
110°-120°	312.2	14.1	8.7
120°-130°	381.0	17.2	10.6
130°-140°	388.1	17.5	10.8
140°-150°	353.8	16.0	9.8
150°-160°	278.4	12.5	7.7
160°-170°	176.2	7.9	4.9
170°-180°	60.6	2.7	1.7
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°	580.3	26.2	16.1
90°-150°	1703.2	76.8	47.3
90°-180°	2218.0	100.0	61.6
0°-180°	2218.4	100.0	61.6

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
90°	0	0	0	0	0	
95°	77	27	75	27	77	88
105°	274	114	180	114	274	276
115°	386	228	287	228	386	382
125°	518	350	369	350	518	462
135°	567	448	455	448	567	442
145°	638	523	532	523	638	397
155°	676	579	574	579	676	311
165°	664	615	588	615	664	189
175°	654	632	624	632	654	62
180°	637	637	637	637	637	



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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°	33.2	31.5	19.1	9.2	10.7	36.9	46.9	42.9	45.0	42.9	46.9
95°	76.8	79.8	56.4	31.3	27.1	64.4	74.4	76.4	75.3	76.4	74.4
97.5°	123.0	133.5	93.6	52.3	45.1	99.0	98.1	95.2	97.6	95.2	98.1
100°	183.7	202.9	135.9	78.2	66.3	129.2	126.5	120.2	122.7	120.2	126.5
102.5°	231.8	258.9	179.2	113.5	89.1	155.4	153.5	145.1	151.1	145.1	153.5
105°	274.4	304.8	217.4	152.2	114.1	180.7	179.9	174.3	180.5	174.3	179.9
107.5°	292.8	326.1	253.9	187.4	140.9	201.5	202.9	201.3	210.4	201.3	202.9
110°	312.1	350.7	305.1	227.1	169.2	224.7	223.4	229.0	239.6	229.0	223.4
112.5°	340.7	396.3	358.3	263.3	197.6	247.9	242.8	251.2	264.9	251.2	242.8
115°	385.8	448.7	409.0	303.5	227.6	270.0	261.7	271.4	286.8	271.4	261.7
117.5°	430.6	489.9	454.3	350.7	259.8	290.0	283.0	292.4	309.1	292.4	283.0
120°	462.7	523.2	490.5	396.9	290.8	309.1	302.7	312.4	329.5	312.4	302.7
122.5°	494.6	550.9	518.3	440.9	321.2	327.0	325.9	331.9	349.7	331.9	325.9
125°	517.8	569.5	530.4	475.7	349.6	345.6	346.9	354.0	368.6	354.0	346.9
127.5°	539.1	585.0	539.1	505.1	377.2	363.4	372.9	375.3	389.6	375.3	372.9
130°	558.8	591.4	556.4	529.6	401.7	380.4	395.8	398.2	410.4	398.2	395.8
132.5°	567.1	590.1	582.8	552.0	426.3	397.7	415.0	421.4	432.5	421.4	415.0
135°	567.1	591.7	607.9	569.1	448.2	410.9	433.3	445.9	454.9	445.9	433.3
137.5°	574.4	604.7	625.4	583.0	468.5	423.6	450.6	468.6	478.3	468.6	450.6
140°	593.3	627.5	637.3	593.6	488.2	436.8	468.6	487.3	499.7	487.3	468.6
142.5°	616.5	649.2	646.2	602.4	506.1	453.0	483.2	504.0	516.3	504.0	483.2
145°	638.1	662.7	656.2	611.1	523.1	470.3	499.1	520.8	531.8	520.8	499.1
147.5°	651.3	672.1	661.0	617.8	538.6	488.4	510.7	534.5	546.1	534.5	510.7
150°	661.6	679.1	665.3	625.4	553.8	507.5	518.6	548.7	558.2	548.7	518.6
152.5°	669.4	684.8	665.7	630.0	566.1	524.0	524.0	559.6	567.4	559.6	524.0
155°	675.6	686.7	664.2	635.4	579.1	540.1	533.1	563.1	574.4	563.1	533.1
157.5°	676.7	684.8	661.2	640.2	590.0	554.1	543.4	564.6	575.3	564.6	543.4
160°	674.8	681.8	656.5	644.9	599.2	568.2	556.9	569.3	574.7	569.3	556.9
162.5°	671.5	675.1	654.5	649.7	608.4	580.7	572.8	578.5	579.2	578.5	572.8
165°	664.2	667.8	650.2	651.3	615.0	590.8	585.4	591.7	587.9	591.7	585.4
167.5°	658.9	661.6	648.3	652.6	621.1	602.2	596.8	605.2	602.4	605.2	596.8
170°	654.5	657.5	647.8	653.5	626.2	611.4	604.9	614.4	610.8	614.4	604.9
172.5°	654.3	655.6	646.8	650.5	630.4	619.5	614.9	622.4	617.4	622.4	614.9
175°	653.5	653.5	643.4	647.8	632.2	626.5	622.7	630.5	624.5	630.5	622.7
177.5°	651.1	650.2	638.1	643.8	633.1	633.3	630.0	637.6	631.1	637.6	630.0
180°	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9



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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°	36.9	10.7	9.2	19.1	31.5	33.2
95°	64.4	27.1	31.3	56.4	79.8	76.8
97.5°	99.0	45.1	52.3	93.6	133.5	123.0
100°	129.2	66.3	78.2	135.9	202.9	183.7
102.5°	155.4	89.1	113.5	179.2	258.9	231.8
105°	180.7	114.1	152.2	217.4	304.8	274.4
107.5°	201.5	140.9	187.4	253.9	326.1	292.8
110°	224.7	169.2	227.1	305.1	350.7	312.1
112.5°	247.9	197.6	263.3	358.3	396.3	340.7
115°	270.0	227.6	303.5	409.0	448.7	385.8
117.5°	290.0	259.8	350.7	454.3	489.9	430.6
120°	309.1	290.8	396.9	490.5	523.2	462.7
122.5°	327.0	321.2	440.9	518.3	550.9	494.6
125°	345.6	349.6	475.7	530.4	569.5	517.8
127.5°	363.4	377.2	505.1	539.1	585.0	539.1
130°	380.4	401.7	529.6	556.4	591.4	558.8
132.5°	397.7	426.3	552.0	582.8	590.1	567.1
135°	410.9	448.2	569.1	607.9	591.7	567.1
137.5°	423.6	468.5	583.0	625.4	604.7	574.4
140°	436.8	488.2	593.6	637.3	627.5	593.3
142.5°	453.0	506.1	602.4	646.2	649.2	616.5
145°	470.3	523.1	611.1	656.2	662.7	638.1
147.5°	488.4	538.6	617.8	661.0	672.1	651.3
150°	507.5	553.8	625.4	665.3	679.1	661.6
152.5°	524.0	566.1	630.0	665.7	684.8	669.4
155°	540.1	579.1	635.4	664.2	686.7	675.6
157.5°	554.1	590.0	640.2	661.2	684.8	676.7
160°	568.2	599.2	644.9	656.5	681.8	674.8
162.5°	580.7	608.4	649.7	654.5	675.1	671.5
165°	590.8	615.0	651.3	650.2	667.8	664.2
167.5°	602.2	621.1	652.6	648.3	661.6	658.9
170°	611.4	626.2	653.5	647.8	657.5	654.5
172.5°	619.5	630.4	650.5	646.8	655.6	654.3
175°	626.5	632.2	647.8	643.4	653.5	653.5
177.5°	633.3	633.1	643.8	638.1	650.2	651.1
180°	636.9	636.9	636.9	636.9	636.9	636.9

(END OF REPORT)