

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P550452

Luminaire Tested: **FCC-X-2-LD4-1HI-30-UNV-81-96-ED1D**

Issue Date: 7/9/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P550452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-248-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FCC-X-2-LD4-1HI-30-UNV-81-96-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

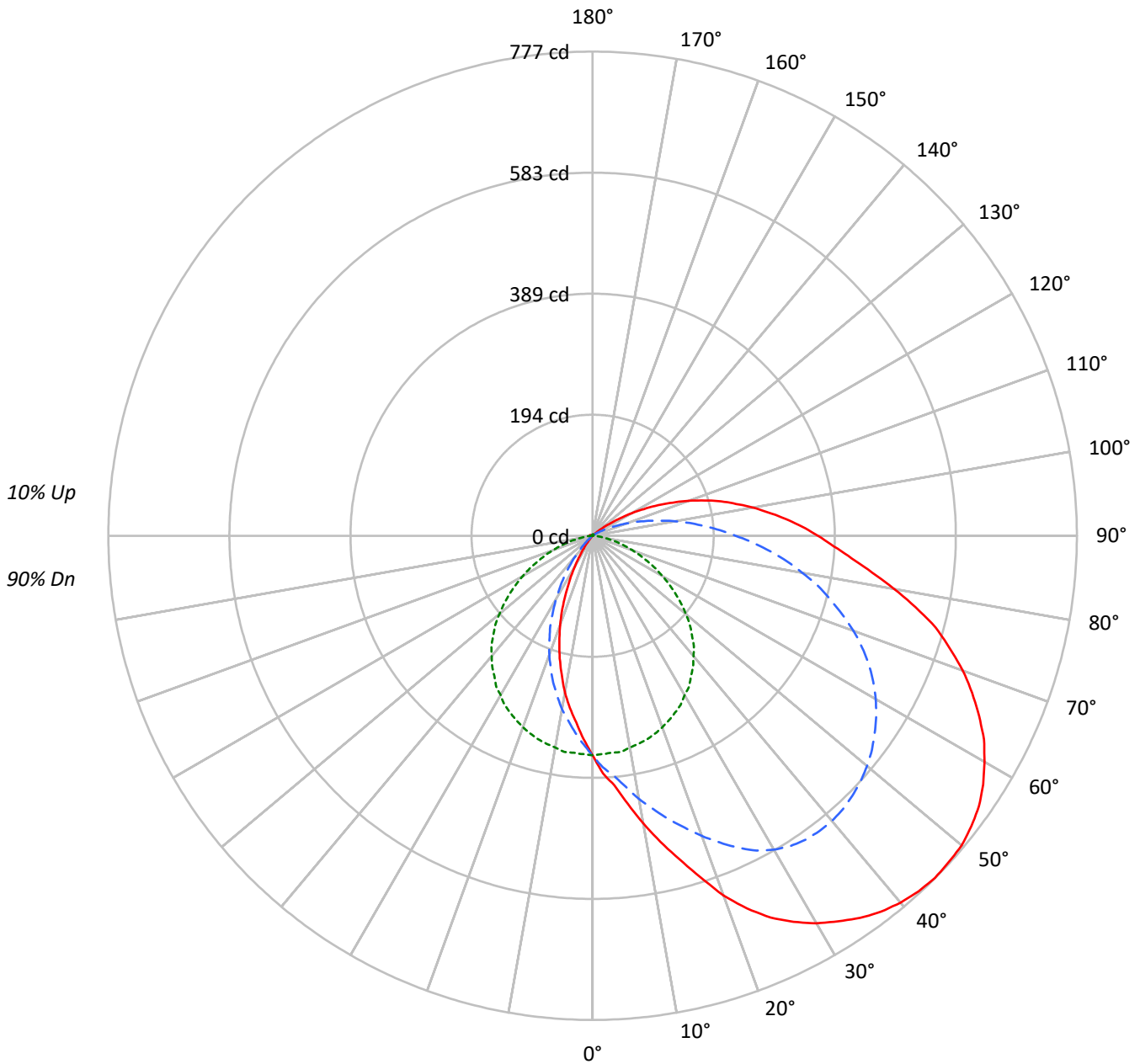
Lumens per Lamp: N/A
Luminaire Lumens: 1740.9 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	90																			
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	67																			
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	53																			
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	43																			
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	36																			
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	30																			
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	26																			
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	23																			
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	20																			
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	18																			
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	16																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3791	3791	3791
5°	4162	3736	3116
10°	4709	3690	2568
15°	5277	3642	2002
20°	5952	3583	1474
25°	6512	3514	968
30°	6927	3422	545
35°	7287	3323	240
40°	7607	3201	57
45°	7881	3047	0
50°	8111	2843	0
55°	8286	2586	0
60°	8375	2286	0
65°	8408	1946	0
70°	8381	1586	0
75°	8274	1171	6
80°	7938	715	36
85°	7673	341	50



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.7	1.9
10°-20°	101.0	5.8
20°-30°	163.6	9.4
30°-40°	210.1	12.1
40°-50°	237.8	13.7
50°-60°	246.4	14.2
60°-70°	232.4	13.3
70°-80°	194.7	11.2
80°-90°	141.2	8.1
90°-100°	92.8	5.3
100°-110°	53.6	3.1
110°-120°	23.6	1.4
120°-130°	6.4	0.4
130°-140°	1.5	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	298.3	17.1
0°-40°	508.4	29.2
0°-60°	992.7	57.0
0°-90°	1560.9	89.7
90°-120°	170.0	9.8
90°-150°	178.7	10.3
90°-180°	180.0	10.3
0°-180°	1740.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	352	352	352	352	352	
5°	402	386	350	317	301	41
15°	537	471	338	244	204	155
25°	676	552	313	161	100	312
35°	749	596	275	78	25	470
45°	777	590	225	18	0	600
55°	757	552	162	0	0	676
65°	684	489	97	0	0	677
75°	570	395	41	0	0	598
85°	417	286	7	2	3	356
90°	362	229	2	3	3	198
95°	310	179	1	3	4	244
105°	214	93	1	2	4	225
115°	116	31	1	1	2	116
125°	34	4	2	1	2	35
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	2	1	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	352.2	352.2	352.2	352.2	352.2	352.2	352.2	352.2	352.2	352.2	352.2
2.5°	381.8	381.3	380.0	377.7	374.6	369.2	364.7	360.7	355.3	350.8	342.3
5°	402.0	399.7	397.9	395.7	388.5	383.6	375.5	366.5	358.0	349.5	332.4
7.5°	434.3	430.7	428.0	421.7	411.8	400.6	388.1	379.5	373.7	349.9	320.8
10°	468.8	465.7	460.3	449.1	437.0	420.8	402.9	382.7	364.7	345.0	310.4
12.5°	502.9	498.4	490.8	476.4	459.4	439.2	414.5	390.7	365.2	341.8	298.3
15°	537.0	532.1	524.0	506.5	484.1	457.6	427.5	397.5	367.4	337.8	285.8
17.5°	574.2	567.5	555.4	535.6	507.4	474.6	439.2	402.9	366.5	332.9	272.3
20°	614.2	604.7	591.7	565.3	532.1	493.5	450.9	408.2	366.1	327.0	257.1
22.5°	647.4	637.9	623.6	596.2	556.3	509.2	460.7	411.8	364.3	320.3	242.7
25°	676.1	668.4	652.7	621.3	579.2	525.8	470.1	414.5	361.6	313.1	227.4
27.5°	698.5	691.3	673.8	641.5	598.5	540.6	477.3	415.9	358.0	306.0	211.7
30°	718.2	711.1	690.0	656.8	611.5	552.2	484.5	416.3	353.5	295.2	194.7
32.5°	733.5	726.8	705.2	669.8	620.4	560.3	488.5	415.9	347.7	287.6	176.3
35°	748.7	742.0	716.9	679.2	627.2	563.9	491.7	413.6	340.5	275.0	158.8
37.5°	760.4	752.8	727.2	685.5	630.3	564.8	491.2	410.5	332.9	264.7	141.3
40°	768.5	760.4	733.0	689.1	631.2	563.5	487.6	405.1	323.9	251.7	122.9
42.5°	773.9	764.9	735.7	694.5	629.4	559.9	482.3	398.4	314.0	240.5	105.4
45°	776.6	767.1	736.2	690.0	626.3	553.1	474.2	389.8	303.3	225.2	87.9
47.5°	775.2	764.9	733.9	685.0	620.4	546.0	465.2	379.5	290.3	211.7	71.3
50°	773.0	762.2	729.0	678.8	612.4	537.0	455.3	367.0	276.8	195.1	56.5
52.5°	765.8	755.0	723.6	669.8	602.9	526.7	441.9	354.0	262.4	179.0	43.1
55°	756.8	746.9	714.2	661.7	590.8	514.1	429.3	340.0	248.5	162.4	31.0
57.5°	742.9	733.9	702.5	648.7	578.7	500.2	415.4	324.8	231.0	145.8	21.5
60°	725.9	716.9	686.4	633.9	564.8	484.5	400.2	309.1	215.3	129.2	13.5
62.5°	707.9	699.4	667.5	615.5	547.3	467.9	383.6	293.4	198.7	113.9	8.1
65°	684.1	676.1	647.4	593.5	528.0	450.0	365.2	274.6	181.7	96.9	4.5
67.5°	659.0	651.8	622.7	573.3	505.6	430.2	346.3	256.2	163.7	82.1	2.2
70°	632.1	623.1	596.2	546.0	482.7	407.8	325.7	237.3	146.7	67.7	0.0
72.5°	600.7	594.0	567.9	520.4	456.2	384.0	304.6	216.7	127.9	53.8	0.4
75°	570.2	561.7	537.9	493.0	430.2	358.9	281.3	197.4	109.5	41.3	0.4
77.5°	530.7	528.0	505.6	462.1	405.5	334.7	255.7	174.1	92.0	29.6	0.4
80°	491.2	488.5	471.0	431.1	376.8	306.0	231.9	152.1	74.9	19.7	0.4
82.5°	452.2	448.6	432.0	398.8	347.7	281.7	207.3	130.1	59.2	12.1	0.4
85°	417.2	412.7	394.8	364.3	317.6	254.4	181.7	108.6	44.0	6.7	0.9
87.5°	387.2	384.0	364.3	332.9	287.1	228.8	159.3	87.9	31.0	3.1	1.3
90°	361.6	354.9	337.4	304.2	258.4	200.5	135.5	70.4	20.6	1.8	1.8
92.5°	336.5	330.6	311.3	277.2	232.8	176.3	112.6	53.8	13.0	0.9	2.2
95°	310.4	304.2	285.3	253.9	206.8	151.6	92.4	39.5	7.2	0.9	2.2
97.5°	284.9	279.0	259.3	227.9	183.5	130.1	73.1	27.8	3.6	0.9	1.8
100°	261.1	254.4	236.4	205.0	160.2	108.6	56.5	17.9	2.2	0.9	1.8
102.5°	236.0	230.6	212.2	181.7	135.9	88.4	42.2	11.2	0.9	0.9	1.3
105°	213.5	206.8	188.9	157.5	115.7	69.5	29.6	6.7	0.9	0.9	1.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	139.1	133.7	118.0	91.5	58.8	27.4	8.1	1.3	1.3	1.3	1.3
115°	116.2	108.1	94.2	70.9	43.5	17.9	4.0	1.3	1.3	1.3	1.3
117.5°	92.9	86.1	76.3	53.8	28.7	11.7	2.2	1.3	1.3	1.3	1.3
120°	72.7	66.4	55.2	37.2	19.3	6.7	0.9	1.3	1.3	1.3	1.3
122.5°	52.0	47.1	37.2	24.2	11.7	3.1	1.3	1.3	1.8	1.8	1.3
125°	34.5	31.9	24.7	14.8	7.2	1.3	1.3	1.3	1.8	1.8	1.3
127.5°	22.4	20.2	14.4	8.5	3.1	1.3	1.3	1.8	1.8	1.8	1.3
130°	12.6	11.2	8.5	4.9	1.3	1.3	1.3	1.8	1.8	1.8	1.3
132.5°	7.2	6.7	4.5	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8
135°	1.8	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.8	2.2	2.2	2.2	1.8
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	1.8
142.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
145°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	1.8	1.8	1.8
147.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	1.8	1.8
150°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
152.5°	0.4	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	1.8
155°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
157.5°	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.2	1.8	1.8	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.8
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.8	1.8	1.8	1.8	1.8
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	1.8	1.8	1.8	1.8
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.8	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.8	1.8	2.2	2.2	2.2	1.8
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	352.2	352.2	352.2
2.5°	335.1	328.8	327.0
5°	317.2	306.9	301.0
7.5°	299.2	285.3	278.6
10°	282.6	262.9	255.7
12.5°	262.9	240.0	228.8
15°	244.0	214.4	203.7
17.5°	223.0	189.8	177.2
20°	203.2	165.1	152.1
22.5°	180.8	140.9	126.5
25°	160.6	116.6	100.5
27.5°	138.2	92.0	78.1
30°	117.1	70.4	56.5
32.5°	96.9	51.6	39.0
35°	78.1	35.0	24.7
37.5°	60.1	21.5	12.6
40°	43.5	11.2	5.8
42.5°	29.2	5.4	3.1
45°	17.9	2.7	0.0
47.5°	10.3	0.0	0.0
50°	5.4	0.0	0.0
52.5°	2.2	0.0	0.0
55°	0.0	0.0	0.0
57.5°	0.0	0.0	0.0
60°	0.0	0.0	0.0
62.5°	0.0	0.0	0.0
65°	0.0	0.0	0.0
67.5°	0.0	0.0	0.0
70°	0.0	0.0	0.0
72.5°	0.0	0.0	0.0
75°	0.4	0.4	0.4
77.5°	0.4	0.9	1.3
80°	0.9	1.8	2.2
82.5°	1.8	2.2	2.2
85°	1.8	2.2	2.7
87.5°	2.2	2.7	3.1
90°	2.7	3.1	3.1
92.5°	2.7	3.6	3.6
95°	3.1	3.6	4.0
97.5°	3.6	4.0	4.0
100°	3.1	4.0	4.5
102.5°	2.7	4.0	4.0
105°	2.2	3.1	3.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.8	2.2	2.2
115°	1.3	1.8	2.2
117.5°	1.3	1.8	1.8
120°	1.3	1.3	1.8
122.5°	1.3	1.3	1.8
125°	1.3	1.3	1.8
127.5°	1.8	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.8	1.3	1.3
135°	1.8	1.3	1.3
137.5°	1.8	1.3	1.3
140°	1.8	1.3	1.3
142.5°	1.8	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.8	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







107.5°	188.4	183.0	165.1	135.5	94.7	52.9	19.7	3.6	0.9	1.3	1.3
110°	164.2	159.7	141.3	112.6	76.3	39.5	13.0	2.2	1.3	1.3	1.3





107.5°	1.8	2.7	3.1
110°	1.8	2.2	2.7



(END OF REPORT)