

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: P551311

Luminaire Tested: **FCC-X-2-LD4-2HI-35-UNV-93-88-ED1D-90**

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: P551311
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-LD4-2HI-35-UNV-93-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

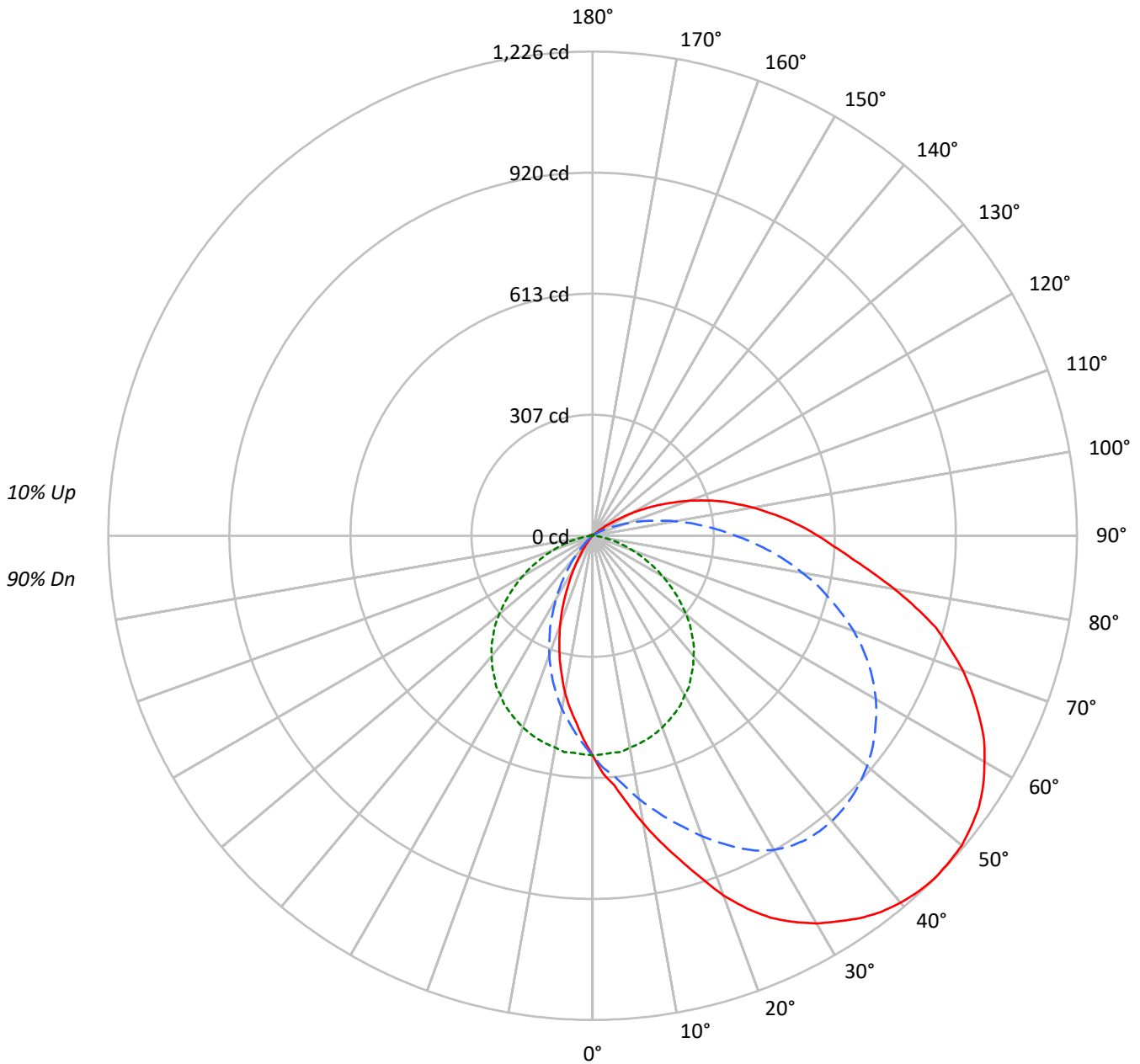
Lumens per Lamp: N/A
Luminaire Lumens: 2747.9 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 43.3
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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CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-88-ED1D-90

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°	5984	5984	5984
5°	6568	5896	4918
10°	7433	5823	4054
15°	8329	5749	3159
20°	9395	5656	2326
25°	10277	5547	1527
30°	10934	5401	860
35°	11502	5245	379
40°	12007	5051	91
45°	12439	4810	0
50°	12802	4489	0
55°	13079	4081	0
60°	13218	3608	0
65°	13272	3071	0
70°	13228	2504	0
75°	13060	1846	10
80°	12531	1132	57
85°	12111	539	77



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	1.9
10°-20°	159.4	5.8
20°-30°	258.2	9.4
30°-40°	331.6	12.1
40°-50°	375.4	13.7
50°-60°	388.9	14.2
60°-70°	366.8	13.3
70°-80°	307.4	11.2
80°-90°	222.8	8.1
90°-100°	146.4	5.3
100°-110°	84.6	3.1
110°-120°	37.3	1.4
120°-130°	10.1	0.4
130°-140°	2.3	0.1
140°-150°	1.5	0.1
150°-160°	1.1	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	470.8	17.1
0°-40°	802.5	29.2
0°-60°	1566.8	57.0
0°-90°	2463.8	89.7
90°-120°	268.3	9.8
90°-150°	282.2	10.3
90°-180°	284.0	10.3
0°-180°	2747.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	556	556	556	556	556	
5°	634	609	552	501	475	64
15°	848	743	533	385	322	244
25°	1067	872	494	254	159	493
35°	1182	940	434	123	39	741
45°	1226	931	356	28	0	946
55°	1195	872	256	0	0	1067
65°	1080	772	153	0	0	1068
75°	900	623	65	1	1	944
85°	658	451	11	3	4	562
90°	571	362	3	4	5	313
95°	490	283	1	5	6	384
105°	337	146	1	4	6	356
115°	183	48	2	2	4	184
125°	54	7	3	2	3	54
135°	3	2	4	3	2	5
145°	1	2	3	2	2	1
155°	1	3	3	2	1	1
165°	1	2	3	2	0	0
175°	1	2	4	2	1	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9	555.9
2.5°	602.6	601.9	599.8	596.2	591.3	582.8	575.7	569.3	560.8	553.7	540.3
5°	634.5	630.9	628.1	624.5	613.2	605.4	592.7	578.5	565.1	551.6	524.7
7.5°	685.4	679.8	675.5	665.6	650.0	632.3	612.5	599.0	589.8	552.3	506.3
10°	740.0	735.0	726.5	708.8	689.7	664.2	635.9	604.0	575.7	544.5	490.0
12.5°	793.8	786.7	774.7	752.0	725.1	693.2	654.3	616.8	576.4	539.6	470.9
15°	847.6	839.8	827.1	799.4	764.0	722.3	674.8	627.4	579.9	533.2	451.1
17.5°	906.4	895.7	876.6	845.5	800.9	749.2	693.2	635.9	578.5	525.4	429.8
20°	969.4	954.5	934.0	892.2	839.8	778.9	711.6	644.4	577.8	516.2	405.7
22.5°	1021.8	1006.9	984.3	941.1	878.0	803.7	727.2	650.0	575.0	505.6	383.1
25°	1067.1	1055.1	1030.3	980.7	914.2	829.9	742.1	654.3	570.7	494.3	359.0
27.5°	1102.5	1091.2	1063.6	1012.6	944.6	853.3	753.4	656.4	565.1	482.9	334.2
30°	1133.7	1122.3	1089.0	1036.7	965.1	871.7	764.7	657.1	558.0	465.9	307.3
32.5°	1157.7	1147.1	1113.1	1057.2	979.3	884.4	771.1	656.4	548.8	453.9	278.3
35°	1181.8	1171.2	1131.5	1072.1	989.9	890.1	776.1	652.9	537.4	434.1	250.7
37.5°	1200.2	1188.2	1147.8	1082.0	994.9	891.5	775.4	647.9	525.4	417.8	223.0
40°	1213.0	1200.2	1157.0	1087.6	996.3	889.4	769.7	639.4	511.2	397.2	194.0
42.5°	1221.5	1207.3	1161.3	1096.1	993.5	883.7	761.2	628.8	495.7	379.5	166.4
45°	1225.7	1210.8	1162.0	1089.0	988.5	873.1	748.5	615.3	478.7	355.5	138.8
47.5°	1223.6	1207.3	1158.4	1081.3	979.3	861.8	734.3	599.0	458.1	334.2	112.6
50°	1220.0	1203.1	1150.7	1071.3	966.5	847.6	718.7	579.2	436.9	308.0	89.2
52.5°	1208.7	1191.7	1142.2	1057.2	951.7	831.3	697.5	558.7	414.2	282.5	68.0
55°	1194.6	1179.0	1127.3	1044.4	932.6	811.5	677.6	536.7	392.3	256.3	48.9
57.5°	1172.6	1158.4	1108.9	1023.9	913.4	789.5	655.7	512.7	364.7	230.1	34.0
60°	1145.7	1131.5	1083.4	1000.5	891.5	764.7	631.6	487.9	339.9	203.9	21.2
62.5°	1117.4	1103.9	1053.6	971.5	863.9	738.5	605.4	463.1	313.7	179.9	12.7
65°	1079.8	1067.1	1021.8	936.8	833.4	710.2	576.4	433.4	286.8	152.9	7.1
67.5°	1040.2	1028.9	982.8	904.9	798.0	679.1	546.6	404.3	258.5	129.6	3.5
70°	997.7	983.5	941.1	861.8	761.9	643.7	514.1	374.6	231.5	106.9	0.0
72.5°	948.1	937.5	896.4	821.4	720.1	606.1	480.8	342.0	201.8	85.0	0.7
75°	900.0	886.5	849.0	778.2	679.1	566.5	444.0	311.6	172.8	65.1	0.7
77.5°	837.7	833.4	798.0	729.3	640.1	528.2	403.6	274.7	145.2	46.7	0.7
80°	775.4	771.1	743.5	680.5	594.8	482.9	366.1	240.0	118.3	31.2	0.7
82.5°	713.8	708.1	681.9	629.5	548.8	444.7	327.1	205.3	93.5	19.1	0.7
85°	658.5	651.4	623.1	575.0	501.3	401.5	286.8	171.4	69.4	10.6	1.4
87.5°	611.1	606.1	575.0	525.4	453.2	361.1	251.4	138.8	48.9	5.0	2.1
90°	570.7	560.1	532.5	480.1	407.9	316.5	213.8	111.2	32.6	2.8	2.8
92.5°	531.1	521.9	491.4	437.6	367.5	278.3	177.7	85.0	20.5	1.4	3.5
95°	490.0	480.1	450.3	400.8	326.4	239.3	145.9	62.3	11.3	1.4	3.5
97.5°	449.6	440.4	409.3	359.7	289.6	205.3	115.4	43.9	5.7	1.4	2.8
100°	412.1	401.5	373.2	323.6	252.8	171.4	89.2	28.3	3.5	1.4	2.8
102.5°	372.5	364.0	334.9	286.8	214.6	139.5	66.6	17.7	1.4	1.4	2.1
105°	337.1	326.4	298.1	248.5	182.7	109.8	46.7	10.6	1.4	1.4	2.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	219.5	211.0	186.2	144.5	92.8	43.2	12.7	2.1	2.1	2.1	2.1
115°	183.4	170.7	148.7	111.9	68.7	28.3	6.4	2.1	2.1	2.1	2.1
117.5°	146.6	136.0	120.4	85.0	45.3	18.4	3.5	2.1	2.1	2.1	2.1
120°	114.7	104.8	87.1	58.8	30.4	10.6	1.4	2.1	2.1	2.1	2.1
122.5°	82.1	74.3	58.8	38.2	18.4	5.0	2.1	2.1	2.8	2.8	2.1
125°	54.5	50.3	38.9	23.4	11.3	2.1	2.1	2.1	2.8	2.8	2.1
127.5°	35.4	31.9	22.7	13.5	5.0	2.1	2.1	2.8	2.8	2.8	2.1
130°	19.8	17.7	13.5	7.8	2.1	2.1	2.1	2.8	2.8	2.8	2.1
132.5°	11.3	10.6	7.1	1.4	2.1	2.1	2.1	2.8	2.8	2.8	2.8
135°	2.8	1.4	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	2.8
137.5°	0.7	0.7	1.4	1.4	2.1	2.1	2.8	3.5	3.5	3.5	2.8
140°	0.7	0.7	1.4	2.1	2.1	2.1	2.8	3.5	3.5	3.5	2.8
142.5°	0.7	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	2.8	2.8
145°	0.7	1.4	1.4	2.1	2.1	2.8	2.8	3.5	2.8	2.8	2.8
147.5°	1.4	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	2.8	2.8
150°	0.7	1.4	1.4	2.1	2.8	2.8	2.8	3.5	2.8	2.8	2.8
152.5°	0.7	1.4	1.4	2.1	2.8	2.8	2.8	3.5	2.8	2.8	2.8
155°	1.4	1.4	1.4	2.1	2.8	2.8	2.8	3.5	2.8	2.8	3.5
157.5°	1.4	1.4	1.4	2.1	2.8	2.8	2.8	3.5	2.8	2.8	3.5
160°	1.4	1.4	1.4	2.1	2.1	2.8	2.8	2.8	2.8	2.8	2.8
162.5°	1.4	1.4	1.4	2.1	2.1	2.8	2.8	2.8	2.8	2.8	2.8
165°	1.4	1.4	1.4	1.4	2.1	2.1	2.8	2.8	2.8	2.8	2.8
167.5°	1.4	1.4	1.4	2.1	2.1	2.1	2.8	2.8	2.8	2.8	2.8
170°	1.4	1.4	1.4	2.1	2.1	2.1	2.8	3.5	3.5	3.5	3.5
172.5°	1.4	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	3.5	3.5
175°	1.4	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	3.5	3.5
177.5°	0.7	1.4	1.4	2.1	2.1	2.8	2.8	3.5	3.5	3.5	2.8
180°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	555.9	555.9	555.9
2.5°	528.9	519.0	516.2
5°	500.6	484.3	475.1
7.5°	472.3	450.3	439.7
10°	446.1	414.9	403.6
12.5°	414.9	378.8	361.1
15°	385.2	338.5	321.5
17.5°	351.9	299.5	279.7
20°	320.8	260.6	240.0
22.5°	285.4	222.3	199.7
25°	253.5	184.1	158.6
27.5°	218.1	145.2	123.2
30°	184.8	111.2	89.2
32.5°	152.9	81.4	61.6
35°	123.2	55.2	38.9
37.5°	94.9	34.0	19.8
40°	68.7	17.7	9.2
42.5°	46.0	8.5	5.0
45°	28.3	4.2	0.0
47.5°	16.3	0.0	0.0
50°	8.5	0.0	0.0
52.5°	3.5	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°	0.7	0.7	0.7
77.5°	0.7	1.4	2.1
80°	1.4	2.8	3.5
82.5°	2.8	3.5	3.5
85°	2.8	3.5	4.2
87.5°	3.5	4.2	5.0
90°	4.2	5.0	5.0
92.5°	4.2	5.7	5.7
95°	5.0	5.7	6.4
97.5°	5.7	6.4	6.4
100°	5.0	6.4	7.1
102.5°	4.2	6.4	6.4
105°	3.5	5.0	5.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.8	3.5	3.5
115°	2.1	2.8	3.5
117.5°	2.1	2.8	2.8
120°	2.1	2.1	2.8
122.5°	2.1	2.1	2.8
125°	2.1	2.1	2.8
127.5°	2.8	2.1	2.1
130°	2.1	2.1	2.1
132.5°	2.8	2.1	2.1
135°	2.8	2.1	2.1
137.5°	2.8	2.1	2.1
140°	2.8	2.1	2.1
142.5°	2.8	2.1	2.1
145°	2.1	2.1	2.1
147.5°	2.1	2.1	2.1
150°	2.1	2.1	1.4
152.5°	2.1	1.4	1.4
155°	2.1	1.4	0.7
157.5°	2.8	1.4	0.7
160°	2.1	1.4	0.7
162.5°	2.1	1.4	0.7
165°	2.1	1.4	0.0
167.5°	2.1	1.4	0.7
170°	2.1	1.4	0.7
172.5°	2.1	1.4	0.7
175°	2.1	0.7	0.7
177.5°	2.1	0.7	0.7
180°	2.1	2.1	2.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	297.4	288.9	260.6	213.8	149.4	83.6	31.2	5.7	1.4	2.1	2.1
110°	259.2	252.1	223.0	177.7	120.4	62.3	20.5	3.5	2.1	2.1	2.1





107.5°	2.8	4.2	5.0
110°	2.8	3.5	4.2



(END OF REPORT)