

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: P551341

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-81-87-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: P551341
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-40-UNV-81-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

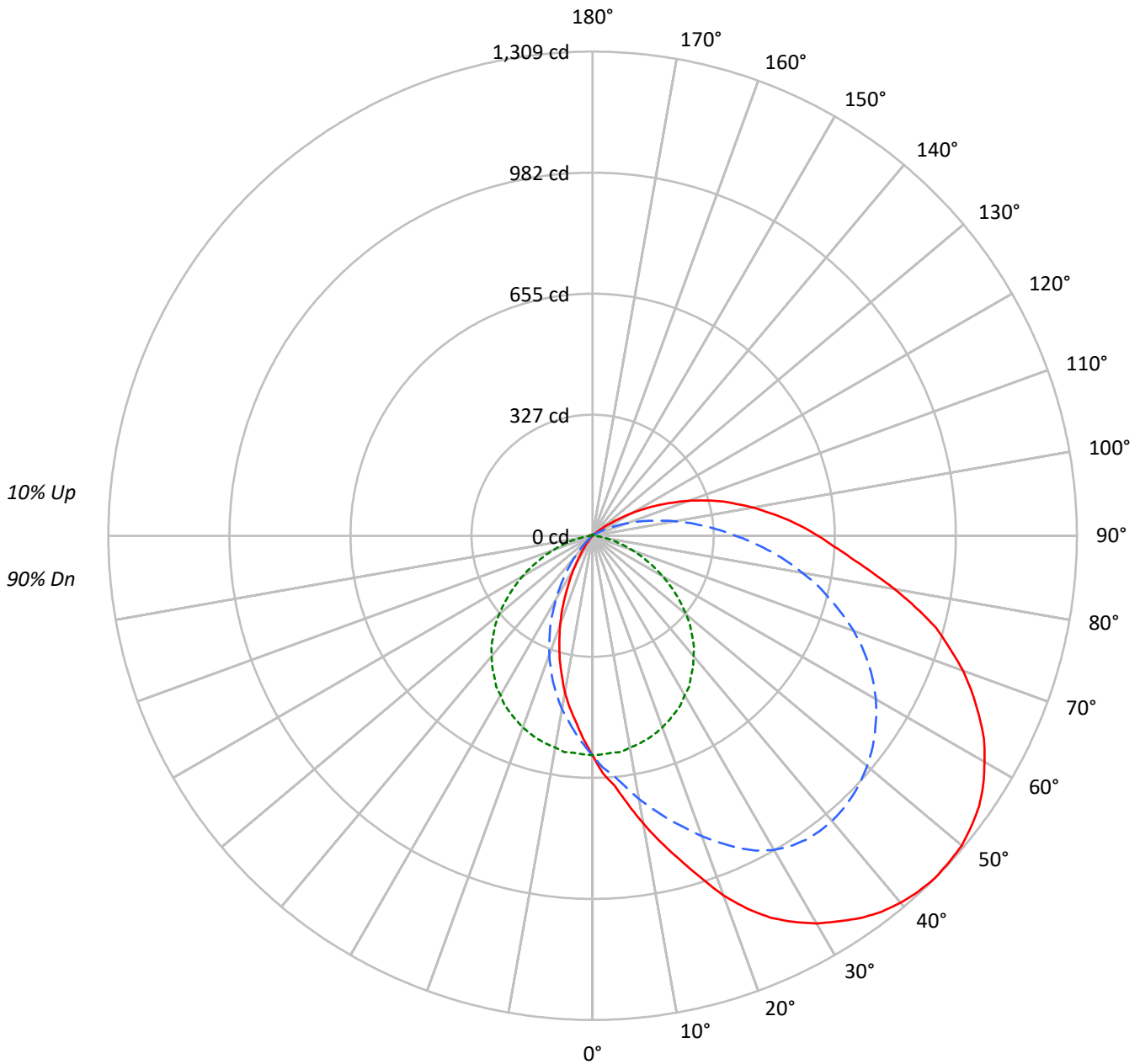
Lumens per Lamp: N/A
Luminaire Lumens: 2934.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6388	6388	6388
5°	7013	6294	5252
10°	7935	6218	4328
15°	8893	6138	3373
20°	10030	6038	2484
25°	10973	5922	1631
30°	11674	5767	919
35°	12281	5599	405
40°	12819	5393	97
45°	13281	5135	0
50°	13668	4794	0
55°	13964	4358	0
60°	14112	3853	0
65°	14170	3280	0
70°	14123	2675	0
75°	13944	1974	12
80°	13378	1208	61
85°	12931	575	83



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.8	1.9
10°-20°	170.2	5.8
20°-30°	275.6	9.4
30°-40°	354.1	12.1
40°-50°	400.8	13.7
50°-60°	415.3	14.2
60°-70°	391.6	13.3
70°-80°	328.2	11.2
80°-90°	237.9	8.1
90°-100°	156.3	5.3
100°-110°	90.3	3.1
110°-120°	39.9	1.4
120°-130°	10.8	0.4
130°-140°	2.5	0.1
140°-150°	1.6	0.1
150°-160°	1.1	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	502.7	17.1
0°-40°	856.8	29.2
0°-60°	1672.9	57.0
0°-90°	2630.6	89.7
90°-120°	286.5	9.8
90°-150°	301.4	10.3
90°-180°	303.0	10.3
0°-180°	2934.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	594	594	594	594	594	
5°	677	651	589	534	507	68
15°	905	793	569	411	343	261
25°	1139	931	528	271	169	527
35°	1262	1004	463	132	42	791
45°	1309	994	380	30	0	1010
55°	1275	931	274	0	0	1139
65°	1153	824	163	0	0	1141
75°	961	665	70	1	1	1008
85°	703	482	11	3	4	600
90°	609	387	3	4	5	334
95°	523	302	2	5	7	410
105°	360	156	2	4	6	380
115°	196	52	2	2	4	196
125°	58	7	3	2	3	58
135°	3	2	4	3	2	5
145°	1	3	3	2	2	1
155°	2	3	3	2	1	1
165°	2	2	3	2	0	0
175°	2	3	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°	593.5	593.5	593.5	593.5	593.5	593.5	593.5	593.5	593.5	593.5	593.5
2.5°	643.4	642.6	640.4	636.6	631.3	622.2	614.6	607.8	598.8	591.2	576.8
5°	677.4	673.6	670.6	666.8	654.7	646.4	632.8	617.7	603.3	588.9	560.2
7.5°	731.8	725.8	721.2	710.7	694.0	675.1	654.0	639.6	629.8	589.7	540.6
10°	790.0	784.8	775.7	756.8	736.4	709.1	678.9	644.9	614.6	581.4	523.2
12.5°	847.5	839.9	827.1	802.9	774.2	740.1	698.6	658.5	615.4	576.1	502.8
15°	905.0	896.6	883.0	853.5	815.7	771.1	720.5	669.8	619.2	569.3	481.6
17.5°	967.7	956.4	936.0	902.7	855.1	799.9	740.1	678.9	617.7	561.0	458.9
20°	1035.0	1019.1	997.2	952.6	896.6	831.6	759.8	688.0	616.9	551.1	433.2
22.5°	1090.9	1075.1	1050.9	1004.8	937.5	858.1	776.4	694.0	613.9	539.8	409.0
25°	1139.3	1126.5	1100.0	1047.1	976.0	886.1	792.3	698.6	609.4	527.7	383.3
27.5°	1177.1	1165.0	1135.5	1081.1	1008.5	911.0	804.4	700.8	603.3	515.6	356.8
30°	1210.4	1198.3	1162.8	1106.8	1030.5	930.7	816.5	701.6	595.7	497.5	328.1
32.5°	1236.1	1224.8	1188.5	1128.7	1045.6	944.3	823.3	700.8	585.9	484.6	297.1
35°	1261.8	1250.5	1208.1	1144.6	1056.9	950.3	828.6	697.1	573.8	463.4	267.6
37.5°	1281.5	1268.6	1225.5	1155.2	1062.2	951.8	827.8	691.8	561.0	446.1	238.1
40°	1295.1	1281.5	1235.3	1161.3	1063.7	949.6	821.8	682.7	545.8	424.1	207.2
42.5°	1304.1	1289.0	1239.9	1170.3	1060.7	943.5	812.7	671.3	529.2	405.2	177.7
45°	1308.7	1292.8	1240.6	1162.8	1055.4	932.2	799.1	657.0	511.1	379.5	148.2
47.5°	1306.4	1289.0	1236.9	1154.4	1045.6	920.1	784.0	639.6	489.1	356.8	120.2
50°	1302.6	1284.5	1228.5	1143.9	1032.0	905.0	767.4	618.4	466.5	328.9	95.3
52.5°	1290.5	1272.4	1219.5	1128.7	1016.1	887.6	744.7	596.5	442.3	301.7	72.6
55°	1275.4	1258.8	1203.6	1115.1	995.7	866.4	723.5	573.1	418.8	273.7	52.2
57.5°	1252.0	1236.9	1183.9	1093.2	975.3	843.0	700.1	547.4	389.4	245.7	36.3
60°	1223.2	1208.1	1156.7	1068.3	951.8	816.5	674.4	520.9	362.9	217.7	22.7
62.5°	1193.0	1178.6	1125.0	1037.3	922.3	788.5	646.4	494.4	334.9	192.0	13.6
65°	1152.9	1139.3	1090.9	1000.2	889.8	758.3	615.4	462.7	306.2	163.3	7.6
67.5°	1110.6	1098.5	1049.4	966.2	852.0	725.0	583.6	431.7	275.9	138.4	3.8
70°	1065.2	1050.1	1004.8	920.1	813.5	687.2	548.9	399.9	247.2	114.2	0.0
72.5°	1012.3	1001.0	957.1	877.0	768.9	647.2	513.3	365.2	215.5	90.7	0.8
75°	960.9	946.5	906.5	830.9	725.0	604.8	474.0	332.6	184.5	69.6	0.8
77.5°	894.4	889.8	852.0	778.7	683.4	564.0	430.9	293.3	155.0	49.9	0.8
80°	827.8	823.3	793.8	726.5	635.1	515.6	390.9	256.3	126.3	33.3	0.8
82.5°	762.1	756.0	728.0	672.1	585.9	474.8	349.3	219.2	99.8	20.4	0.8
85°	703.1	695.5	665.3	613.9	535.3	428.7	306.2	183.0	74.1	11.3	1.5
87.5°	652.4	647.2	613.9	561.0	483.9	385.6	268.4	148.2	52.2	5.3	2.3
90°	609.4	598.0	568.5	512.6	435.5	337.9	228.3	118.7	34.8	3.0	3.0
92.5°	567.0	557.2	524.7	467.2	392.4	297.1	189.8	90.7	21.9	1.5	3.8
95°	523.2	512.6	480.8	427.9	348.5	255.5	155.7	66.5	12.1	1.5	3.8
97.5°	480.1	470.2	437.0	384.1	309.2	219.2	123.2	46.9	6.0	1.5	3.0
100°	440.0	428.7	398.4	345.5	269.9	183.0	95.3	30.2	3.8	1.5	3.0
102.5°	397.7	388.6	357.6	306.2	229.1	148.9	71.1	18.9	1.5	1.5	2.3
105°	359.9	348.5	318.3	265.4	195.1	117.2	49.9	11.3	1.5	1.5	2.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	234.4	225.3	198.8	154.2	99.0	46.1	13.6	2.3	2.3	2.3	2.3
115°	195.8	182.2	158.8	119.5	73.3	30.2	6.8	2.3	2.3	2.3	2.3
117.5°	156.5	145.2	128.5	90.7	48.4	19.7	3.8	2.3	2.3	2.3	2.3
120°	122.5	111.9	93.0	62.7	32.5	11.3	1.5	2.3	2.3	2.3	2.3
122.5°	87.7	79.4	62.7	40.8	19.7	5.3	2.3	2.3	3.0	3.0	2.3
125°	58.2	53.7	41.6	24.9	12.1	2.3	2.3	2.3	3.0	3.0	2.3
127.5°	37.8	34.0	24.2	14.4	5.3	2.3	2.3	3.0	3.0	3.0	2.3
130°	21.2	18.9	14.4	8.3	2.3	2.3	2.3	3.0	3.0	3.0	2.3
132.5°	12.1	11.3	7.6	1.5	2.3	2.3	2.3	3.0	3.0	3.0	3.0
135°	3.0	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0
137.5°	0.8	0.8	1.5	1.5	2.3	2.3	3.0	3.8	3.8	3.8	3.0
140°	0.8	0.8	1.5	2.3	2.3	2.3	3.0	3.8	3.8	3.8	3.0
142.5°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0	3.0
145°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.0	3.0	3.0
147.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.0	3.0
150°	0.8	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.0
152.5°	0.8	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.0
155°	1.5	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.8
157.5°	1.5	1.5	1.5	2.3	3.0	3.0	3.0	3.8	3.0	3.0	3.8
160°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0	3.0
162.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0	3.0
165°	1.5	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.0	3.0	3.0
167.5°	1.5	1.5	1.5	2.3	2.3	2.3	3.0	3.0	3.0	3.0	3.0
170°	1.5	1.5	1.5	2.3	2.3	2.3	3.0	3.8	3.8	3.8	3.8
172.5°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.8
175°	1.5	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.8
177.5°	0.8	1.5	1.5	2.3	2.3	3.0	3.0	3.8	3.8	3.8	3.0
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	593.5	593.5	593.5
2.5°	564.7	554.2	551.1
5°	534.5	517.1	507.3
7.5°	504.3	480.8	469.5
10°	476.3	443.0	430.9
12.5°	443.0	404.5	385.6
15°	411.3	361.4	343.2
17.5°	375.7	319.8	298.6
20°	342.5	278.2	256.3
22.5°	304.7	237.4	213.2
25°	270.7	196.6	169.3
27.5°	232.9	155.0	131.5
30°	197.3	118.7	95.3
32.5°	163.3	86.9	65.8
35°	131.5	59.0	41.6
37.5°	101.3	36.3	21.2
40°	73.3	18.9	9.8
42.5°	49.1	9.1	5.3
45°	30.2	4.5	0.0
47.5°	17.4	0.0	0.0
50°	9.1	0.0	0.0
52.5°	3.8	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°	0.8	0.8	0.8
77.5°	0.8	1.5	2.3
80°	1.5	3.0	3.8
82.5°	3.0	3.8	3.8
85°	3.0	3.8	4.5
87.5°	3.8	4.5	5.3
90°	4.5	5.3	5.3
92.5°	4.5	6.0	6.0
95°	5.3	6.0	6.8
97.5°	6.0	6.8	6.8
100°	5.3	6.8	7.6
102.5°	4.5	6.8	6.8
105°	3.8	5.3	6.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.0	3.8	3.8
115°	2.3	3.0	3.8
117.5°	2.3	3.0	3.0
120°	2.3	2.3	3.0
122.5°	2.3	2.3	3.0
125°	2.3	2.3	3.0
127.5°	3.0	2.3	2.3
130°	2.3	2.3	2.3
132.5°	3.0	2.3	2.3
135°	3.0	2.3	2.3
137.5°	3.0	2.3	2.3
140°	3.0	2.3	2.3
142.5°	3.0	2.3	2.3
145°	2.3	2.3	2.3
147.5°	2.3	2.3	2.3
150°	2.3	2.3	1.5
152.5°	2.3	1.5	1.5
155°	2.3	1.5	0.8
157.5°	3.0	1.5	0.8
160°	2.3	1.5	0.8
162.5°	2.3	1.5	0.8
165°	2.3	1.5	0.0
167.5°	2.3	1.5	0.8
170°	2.3	1.5	0.8
172.5°	2.3	1.5	0.8
175°	2.3	0.8	0.8
177.5°	2.3	0.8	0.8
180°	2.3	2.3	2.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	317.5	308.5	278.2	228.3	159.5	89.2	33.3	6.0	1.5	2.3	2.3
110°	276.7	269.1	238.1	189.8	128.5	66.5	21.9	3.8	2.3	2.3	2.3





107.5°	3.0	4.5	5.3
110°	3.0	3.8	4.5



(END OF REPORT)