

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: P551309

Luminaire Tested: **FCC-X-2-LD4-2HI-35-UNV-93-87-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: P551309  
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-93-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

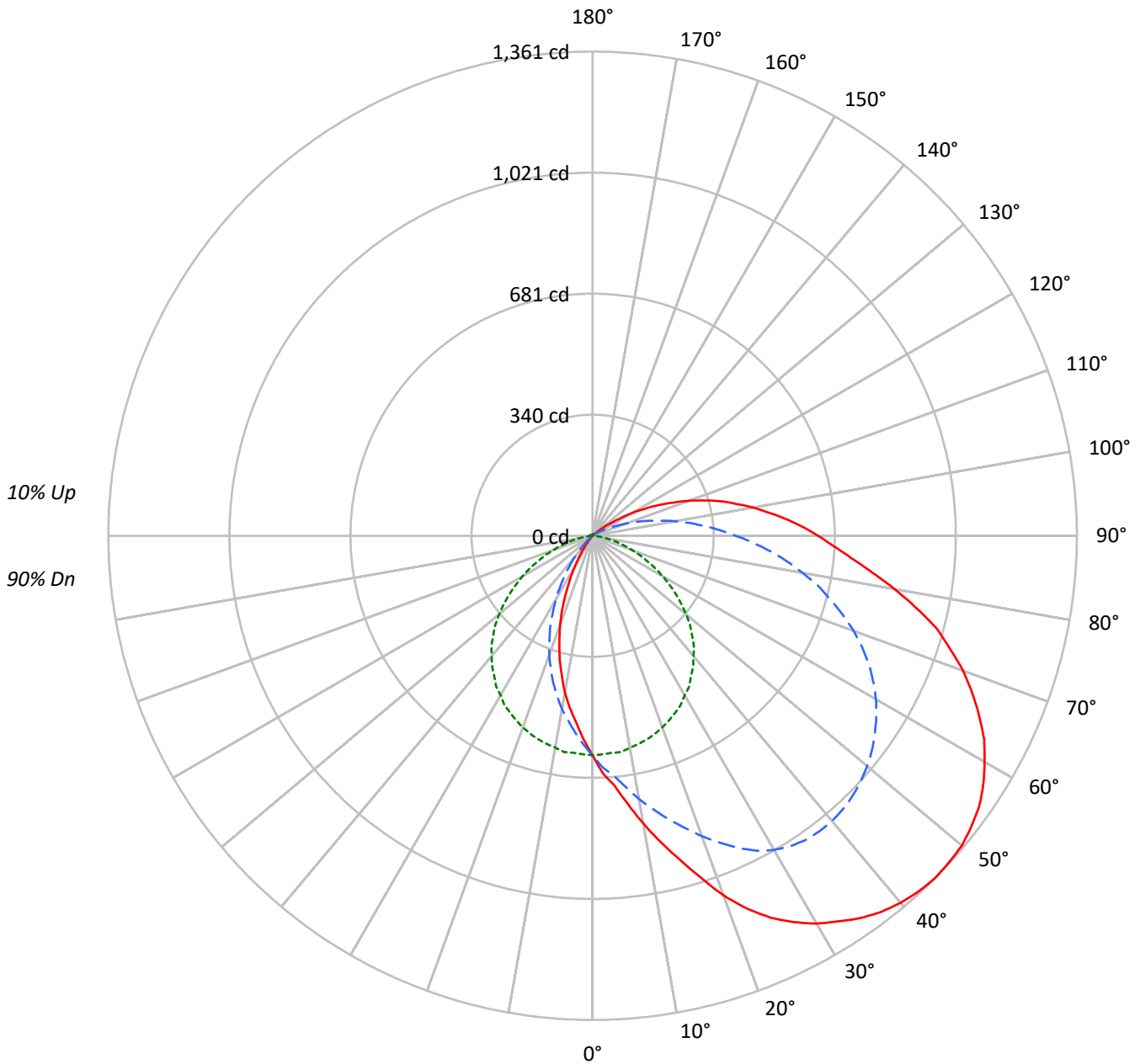
Lumens per Lamp: N/A  
Luminaire Lumens: 3051.0 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<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

TEST NUMBER: P551309

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-87-ED1D-90

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	6642	6642	6642
5°	7292	6545	5461
10°	8251	6466	4501
15°	9247	6383	3507
20°	10431	6279	2583
25°	11411	6158	1696
30°	12140	5997	956
35°	12770	5823	420
40°	13330	5608	101
45°	13811	5341	0
50°	14214	4984	0
55°	14521	4532	0
60°	14675	4006	0
65°	14735	3411	0
70°	14686	2781	0
75°	14499	2050	12
80°	13913	1255	63
85°	13446	600	86



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.1	1.9
10°-20°	177.0	5.8
20°-30°	286.6	9.4
30°-40°	368.2	12.1
40°-50°	416.8	13.7
50°-60°	431.8	14.2
60°-70°	407.2	13.3
70°-80°	341.3	11.2
80°-90°	247.4	8.1
90°-100°	162.6	5.3
100°-110°	93.9	3.1
110°-120°	41.4	1.4
120°-130°	11.2	0.4
130°-140°	2.6	0.1
140°-150°	1.7	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	522.8	17.1
0°-40°	891.0	29.2
0°-60°	1739.6	57.0
0°-90°	2735.5	89.7
90°-120°	297.9	9.8
90°-150°	313.4	10.3
90°-180°	316.0	10.4
0°-180°	3051.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	617	617	617	617	617	
5°	704	676	612	556	528	71
15°	941	825	592	428	357	271
25°	1185	968	549	281	176	548
35°	1312	1044	482	137	43	823
45°	1361	1033	395	31	0	1051
55°	1326	968	285	0	0	1184
65°	1199	857	170	0	0	1186
75°	999	691	72	1	1	1048
85°	731	501	12	3	5	624
90°	634	402	3	5	6	347
95°	544	314	2	6	7	427
105°	374	162	2	4	6	395
115°	204	54	2	2	4	204
125°	60	8	3	2	3	60
135°	3	2	4	3	2	6
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°	617.1	617.1	617.1	617.1	617.1	617.1	617.1	617.1	617.1	617.1	617.1
2.5°	669.0	668.2	665.9	662.0	656.5	647.0	639.2	632.1	622.6	614.8	599.8
5°	704.4	700.5	697.3	693.4	680.8	672.2	658.0	642.3	627.4	612.4	582.6
7.5°	761.0	754.7	750.0	739.0	721.7	702.1	680.0	665.1	654.9	613.2	562.1
10°	821.5	816.0	806.6	787.0	765.7	737.4	706.0	670.6	639.2	604.6	544.0
12.5°	881.3	873.4	860.1	834.9	805.0	769.7	726.4	684.8	639.9	599.1	522.8
15°	941.0	932.4	918.2	887.6	848.3	801.9	749.2	696.5	643.9	592.0	500.8
17.5°	1006.3	994.5	973.3	938.7	889.2	831.8	769.7	706.0	642.3	583.3	477.2
20°	1076.3	1059.8	1037.0	990.6	932.4	864.8	790.1	715.4	641.5	573.1	450.5
22.5°	1134.4	1117.9	1092.8	1044.8	974.9	892.3	807.4	721.7	638.4	561.3	425.3
25°	1184.8	1171.4	1143.9	1088.8	1014.9	921.4	823.9	726.4	633.7	548.7	398.6
27.5°	1224.1	1211.5	1180.8	1124.2	1048.8	947.3	836.5	728.8	627.4	536.2	371.1
30°	1258.7	1246.1	1209.1	1151.0	1071.6	967.8	849.1	729.6	619.5	517.3	341.2
32.5°	1285.4	1273.6	1235.9	1173.8	1087.3	981.9	856.1	728.8	609.3	503.9	309.0
35°	1312.1	1300.3	1256.3	1190.3	1099.1	988.2	861.6	724.8	596.7	481.9	278.3
37.5°	1332.6	1319.2	1274.4	1201.3	1104.6	989.8	860.9	719.3	583.3	463.8	247.6
40°	1346.7	1332.6	1284.6	1207.6	1106.1	987.4	854.6	709.9	567.6	441.0	215.4
42.5°	1356.1	1340.4	1289.3	1217.0	1103.0	981.1	845.1	698.1	550.3	421.4	184.8
45°	1360.9	1344.4	1290.1	1209.1	1097.5	969.3	831.0	683.2	531.5	394.7	154.1
47.5°	1358.5	1340.4	1286.2	1200.5	1087.3	956.8	815.3	665.1	508.7	371.1	125.0
50°	1354.6	1335.7	1277.5	1189.5	1073.1	941.0	798.0	643.1	485.1	342.0	99.1
52.5°	1342.0	1323.1	1268.1	1173.8	1056.6	923.0	774.4	620.3	459.9	313.7	75.5
55°	1326.3	1309.0	1251.6	1159.6	1035.4	901.0	752.4	595.9	435.5	284.6	54.2
57.5°	1301.9	1286.2	1231.1	1136.8	1014.2	876.6	728.0	569.2	404.9	255.5	37.7
60°	1272.0	1256.3	1202.8	1110.9	989.8	849.1	701.3	541.7	377.4	226.4	23.6
62.5°	1240.6	1225.6	1169.8	1078.6	959.1	820.0	672.2	514.2	348.3	199.7	14.2
65°	1198.9	1184.8	1134.4	1040.1	925.3	788.5	639.9	481.1	318.4	169.8	7.9
67.5°	1154.9	1142.3	1091.2	1004.7	886.0	753.9	606.9	448.9	287.0	143.9	3.9
70°	1107.7	1092.0	1044.8	956.8	845.9	714.6	570.8	415.9	257.1	118.7	0.0
72.5°	1052.7	1040.9	995.3	912.0	799.5	673.0	533.8	379.7	224.1	94.3	0.8
75°	999.2	984.3	942.6	864.0	753.9	628.9	492.9	345.9	191.8	72.3	0.8
77.5°	930.0	925.3	886.0	809.8	710.7	586.5	448.1	305.0	161.2	51.9	0.8
80°	860.9	856.1	825.5	755.5	660.4	536.2	406.5	266.5	131.3	34.6	0.8
82.5°	792.5	786.2	757.1	698.9	609.3	493.7	363.2	228.0	103.8	21.2	0.8
85°	731.1	723.3	691.8	638.4	556.6	445.8	318.4	190.3	77.0	11.8	1.6
87.5°	678.5	673.0	638.4	583.3	503.1	400.9	279.1	154.1	54.2	5.5	2.4
90°	633.7	621.9	591.2	533.0	452.8	351.4	237.4	123.4	36.2	3.1	3.1
92.5°	589.6	579.4	545.6	485.9	408.0	309.0	197.3	94.3	22.8	1.6	3.9
95°	544.0	533.0	500.0	445.0	362.4	265.7	162.0	69.2	12.6	1.6	3.9
97.5°	499.2	489.0	454.4	399.4	321.5	228.0	128.1	48.7	6.3	1.6	3.1
100°	457.6	445.8	414.3	359.3	280.7	190.3	99.1	31.4	3.9	1.6	3.1
102.5°	413.5	404.1	371.9	318.4	238.2	154.9	73.9	19.7	1.6	1.6	2.4
105°	374.2	362.4	331.0	275.9	202.8	121.9	51.9	11.8	1.6	1.6	2.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	243.7	234.3	206.8	160.4	103.0	48.0	14.2	2.4	2.4	2.4	2.4
115°	203.6	189.5	165.1	124.2	76.3	31.4	7.1	2.4	2.4	2.4	2.4
117.5°	162.7	150.9	133.6	94.3	50.3	20.4	3.9	2.4	2.4	2.4	2.4
120°	127.4	116.4	96.7	65.3	33.8	11.8	1.6	2.4	2.4	2.4	2.4
122.5°	91.2	82.5	65.3	42.5	20.4	5.5	2.4	2.4	3.1	3.1	2.4
125°	60.5	55.8	43.2	25.9	12.6	2.4	2.4	2.4	3.1	3.1	2.4
127.5°	39.3	35.4	25.2	14.9	5.5	2.4	2.4	3.1	3.1	3.1	2.4
130°	22.0	19.7	14.9	8.6	2.4	2.4	2.4	3.1	3.1	3.1	2.4
132.5°	12.6	11.8	7.9	1.6	2.4	2.4	2.4	3.1	3.1	3.1	3.1
135°	3.1	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.1	3.9	3.9	3.9	3.1
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.1	3.9	3.9	3.9	3.1
142.5°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1	3.1
145°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.1	3.1	3.1
147.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.1	3.1
150°	0.8	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.1
152.5°	0.8	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.1
155°	1.6	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.9
157.5°	1.6	1.6	1.6	2.4	3.1	3.1	3.1	3.9	3.1	3.1	3.9
160°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1	3.1
162.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.6	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.1	3.1	3.1
167.5°	1.6	1.6	1.6	2.4	2.4	2.4	3.1	3.1	3.1	3.1	3.1
170°	1.6	1.6	1.6	2.4	2.4	2.4	3.1	3.9	3.9	3.9	3.9
172.5°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.9
175°	1.6	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.9
177.5°	0.8	1.6	1.6	2.4	2.4	3.1	3.1	3.9	3.9	3.9	3.1
180°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	617.1	617.1	617.1
2.5°	587.3	576.3	573.1
5°	555.8	537.7	527.5
7.5°	524.4	500.0	488.2
10°	495.3	460.7	448.1
12.5°	460.7	420.6	400.9
15°	427.7	375.8	356.9
17.5°	390.7	332.6	310.5
20°	356.1	289.3	266.5
22.5°	316.8	246.9	221.7
25°	281.4	204.4	176.1
27.5°	242.1	161.2	136.8
30°	205.2	123.4	99.1
32.5°	169.8	90.4	68.4
35°	136.8	61.3	43.2
37.5°	105.3	37.7	22.0
40°	76.3	19.7	10.2
42.5°	51.1	9.4	5.5
45°	31.4	4.7	0.0
47.5°	18.1	0.0	0.0
50°	9.4	0.0	0.0
52.5°	3.9	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	1.6	2.4
80°	1.6	3.1	3.9
82.5°	3.1	3.9	3.9
85°	3.1	3.9	4.7
87.5°	3.9	4.7	5.5
90°	4.7	5.5	5.5
92.5°	4.7	6.3	6.3
95°	5.5	6.3	7.1
97.5°	6.3	7.1	7.1
100°	5.5	7.1	7.9
102.5°	4.7	7.1	7.1
105°	3.9	5.5	6.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.1	3.9	3.9
115°	2.4	3.1	3.9
117.5°	2.4	3.1	3.1
120°	2.4	2.4	3.1
122.5°	2.4	2.4	3.1
125°	2.4	2.4	3.1
127.5°	3.1	2.4	2.4
130°	2.4	2.4	2.4
132.5°	3.1	2.4	2.4
135°	3.1	2.4	2.4
137.5°	3.1	2.4	2.4
140°	3.1	2.4	2.4
142.5°	3.1	2.4	2.4
145°	2.4	2.4	2.4
147.5°	2.4	2.4	2.4
150°	2.4	2.4	1.6
152.5°	2.4	1.6	1.6
155°	2.4	1.6	0.8
157.5°	3.1	1.6	0.8
160°	2.4	1.6	0.8
162.5°	2.4	1.6	0.8
165°	2.4	1.6	0.0
167.5°	2.4	1.6	0.8
170°	2.4	1.6	0.8
172.5°	2.4	1.6	0.8
175°	2.4	0.8	0.8
177.5°	2.4	0.8	0.8
180°	2.4	2.4	2.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	330.2	320.8	289.3	237.4	165.9	92.8	34.6	6.3	1.6	2.4	2.4
110°	287.7	279.9	247.6	197.3	133.6	69.2	22.8	3.9	2.4	2.4	2.4







107.5°	3.1	4.7	5.5
110°	3.1	3.9	4.7



(END OF REPORT)