

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: P551254

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-93-97-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: P551254  
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-30-UNV-93-97-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K,  
AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

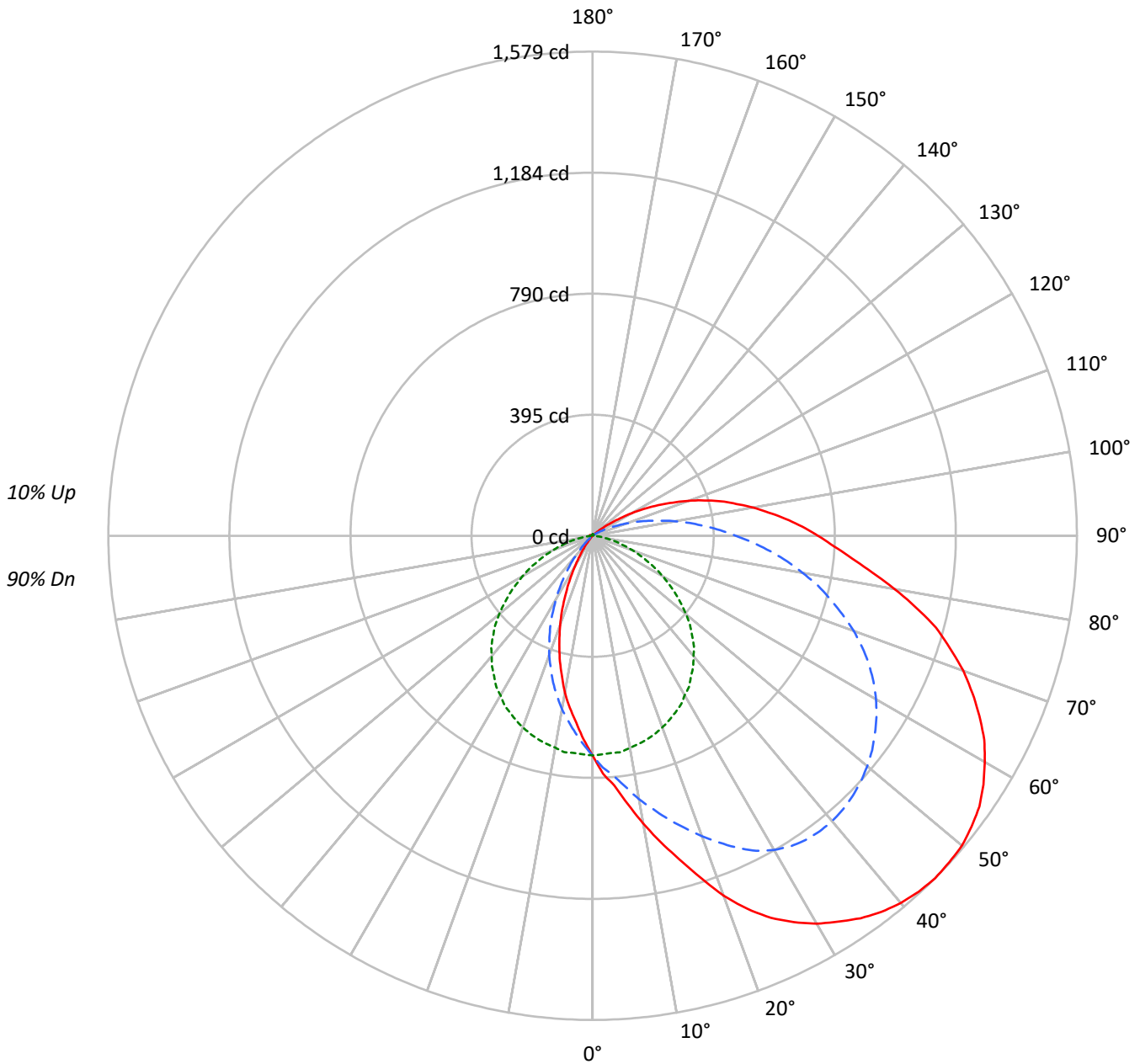
Lumens per Lamp: N/A  
Luminaire Lumens: 3540.9 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<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: P551254

CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-93-97-ED1D

### 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°	7710	7710	7710
5°	8463	7597	6338
10°	9577	7504	5224
15°	10733	7409	4070
20°	12105	7288	2997
25°	13243	7148	1969
30°	14089	6960	1109
35°	14821	6758	489
40°	15471	6510	118
45°	16028	6197	0
50°	16496	5785	0
55°	16853	5260	0
60°	17032	4651	0
65°	17103	3959	0
70°	17045	3228	0
75°	16828	2379	13
80°	16146	1455	74
85°	15607	697	101



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.6	1.9
10°-20°	205.4	5.8
20°-30°	332.7	9.4
30°-40°	427.3	12.1
40°-50°	483.7	13.7
50°-60°	501.2	14.2
60°-70°	472.7	13.3
70°-80°	396.1	11.2
80°-90°	287.1	8.1
90°-100°	188.7	5.3
100°-110°	109.0	3.1
110°-120°	48.1	1.4
120°-130°	13.0	0.4
130°-140°	3.0	0.1
140°-150°	1.9	0.1
150°-160°	1.4	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	606.7	17.1
0°-40°	1034.0	29.2
0°-60°	2019.0	57.0
0°-90°	3174.8	89.7
90°-120°	345.7	9.8
90°-150°	363.6	10.3
90°-180°	366.0	10.3
0°-180°	3540.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	716	716	716	716	716	
5°	818	785	711	645	612	82
15°	1092	958	687	496	414	315
25°	1375	1124	637	327	204	635
35°	1523	1211	559	159	50	955
45°	1579	1199	458	36	0	1219
55°	1539	1124	330	0	0	1375
65°	1392	995	197	0	0	1377
75°	1160	802	84	1	1	1216
85°	849	582	14	4	6	725
90°	735	467	4	6	6	403
95°	631	364	2	6	8	495
105°	434	188	2	5	7	458
115°	236	62	3	3	5	237
125°	70	9	4	3	4	70
135°	4	3	5	4	3	7
145°	1	3	4	3	3	1
155°	2	4	4	3	1	1
165°	2	3	4	3	0	1
175°	2	3	5	3	1	0
180°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	716.3	716.3	716.3	716.3	716.3	716.3	716.3	716.3	716.3	716.3	716.3
2.5°	776.5	775.6	772.8	768.3	761.9	750.9	741.8	733.6	722.6	713.5	696.2
5°	817.5	813.0	809.3	804.8	790.2	780.1	763.7	745.5	728.1	710.8	676.1
7.5°	883.2	875.9	870.5	857.7	837.6	814.8	789.3	771.9	760.1	711.7	652.4
10°	953.5	947.1	936.2	913.3	888.7	855.9	819.4	778.3	741.8	701.7	631.4
12.5°	1022.8	1013.7	998.2	969.0	934.3	893.3	843.1	794.7	742.7	695.3	606.8
15°	1092.2	1082.1	1065.7	1030.1	984.5	930.7	869.5	808.4	747.3	687.1	581.2
17.5°	1167.9	1154.2	1129.6	1089.4	1032.0	965.4	893.3	819.4	745.5	677.0	553.8
20°	1249.1	1230.0	1203.5	1149.7	1082.1	1003.7	917.0	830.3	744.5	665.2	522.8
22.5°	1316.6	1297.5	1268.3	1212.6	1131.4	1035.6	937.1	837.6	740.9	651.5	493.6
25°	1375.0	1359.5	1327.6	1263.7	1177.9	1069.4	956.2	843.1	735.4	636.9	462.6
27.5°	1420.7	1406.1	1370.5	1304.8	1217.2	1099.5	970.8	845.8	728.1	622.3	430.7
30°	1460.8	1446.2	1403.3	1335.8	1243.6	1123.2	985.4	846.7	719.0	600.4	396.0
32.5°	1491.8	1478.1	1434.3	1362.3	1261.9	1139.6	993.6	845.8	707.1	584.9	358.6
35°	1522.8	1509.2	1458.1	1381.4	1275.6	1146.9	1000.0	841.3	692.5	559.3	323.0
37.5°	1546.6	1531.1	1479.1	1394.2	1282.0	1148.8	999.1	834.9	677.0	538.3	287.4
40°	1563.0	1546.6	1490.9	1401.5	1283.8	1146.0	991.8	823.9	658.8	511.9	250.0
42.5°	1573.9	1555.7	1496.4	1412.4	1280.1	1138.7	980.9	810.2	638.7	489.1	214.4
45°	1579.4	1560.3	1497.3	1403.3	1273.8	1125.0	964.4	792.9	616.8	458.0	178.8
47.5°	1576.7	1555.7	1492.7	1393.3	1261.9	1110.4	946.2	771.9	590.3	430.7	145.1
50°	1572.1	1550.2	1482.7	1380.5	1245.5	1092.2	926.1	746.4	563.0	396.9	115.0
52.5°	1557.5	1535.6	1471.8	1362.3	1226.3	1071.2	898.7	719.9	533.8	364.1	87.6
55°	1539.3	1519.2	1452.6	1345.8	1201.7	1045.6	873.2	691.6	505.5	330.3	63.0
57.5°	1511.0	1492.7	1428.9	1319.4	1177.0	1017.4	844.9	660.6	469.9	296.5	43.8
60°	1476.3	1458.1	1396.0	1289.3	1148.8	985.4	813.9	628.7	438.0	262.8	27.4
62.5°	1439.8	1422.5	1357.7	1251.9	1113.2	951.7	780.1	596.7	404.2	231.8	16.4
65°	1391.5	1375.0	1316.6	1207.1	1073.9	915.2	742.7	558.4	369.5	197.1	9.1
67.5°	1340.4	1325.8	1266.5	1166.1	1028.3	875.0	704.4	521.0	333.0	167.0	4.6
70°	1285.6	1267.4	1212.6	1110.4	981.8	829.4	662.4	482.7	298.4	137.8	0.0
72.5°	1221.7	1208.1	1155.1	1058.4	927.9	781.0	619.5	440.7	260.0	109.5	0.9
75°	1159.7	1142.4	1094.0	1002.8	875.0	729.9	572.1	401.5	222.6	83.9	0.9
77.5°	1079.4	1073.9	1028.3	939.8	824.8	680.7	520.1	354.0	187.0	60.2	0.9
80°	999.1	993.6	958.1	876.8	766.4	622.3	471.7	309.3	152.4	40.1	0.9
82.5°	919.7	912.4	878.7	811.2	707.1	573.0	421.5	264.6	120.4	24.6	0.9
85°	848.6	839.4	802.9	740.9	646.0	517.3	369.5	220.8	89.4	13.7	1.8
87.5°	787.4	781.0	740.9	677.0	584.0	465.3	323.9	178.8	63.0	6.4	2.7
90°	735.4	721.7	686.1	618.6	525.6	407.9	275.6	143.3	42.0	3.6	3.6
92.5°	684.3	672.5	633.2	563.9	473.6	358.6	229.0	109.5	26.5	1.8	4.6
95°	631.4	618.6	580.3	516.4	420.6	308.4	188.0	80.3	14.6	1.8	4.6
97.5°	579.4	567.5	527.4	463.5	373.2	264.6	148.7	56.6	7.3	1.8	3.6
100°	531.0	517.3	480.9	417.0	325.7	220.8	115.0	36.5	4.6	1.8	3.6
102.5°	479.9	469.0	431.6	369.5	276.5	179.7	85.8	22.8	1.8	1.8	2.7
105°	434.3	420.6	384.1	320.3	235.4	141.4	60.2	13.7	1.8	1.8	2.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	282.9	271.9	240.0	186.1	119.5	55.7	16.4	2.7	2.7	2.7	2.7
115°	236.3	219.9	191.6	144.2	88.5	36.5	8.2	2.7	2.7	2.7	2.7
117.5°	188.9	175.2	155.1	109.5	58.4	23.7	4.6	2.7	2.7	2.7	2.7
120°	147.8	135.0	112.2	75.7	39.2	13.7	1.8	2.7	2.7	2.7	2.7
122.5°	105.8	95.8	75.7	49.3	23.7	6.4	2.7	2.7	3.6	3.6	2.7
125°	70.3	64.8	50.2	30.1	14.6	2.7	2.7	2.7	3.6	3.6	2.7
127.5°	45.6	41.1	29.2	17.3	6.4	2.7	2.7	3.6	3.6	3.6	2.7
130°	25.5	22.8	17.3	10.0	2.7	2.7	2.7	3.6	3.6	3.6	2.7
132.5°	14.6	13.7	9.1	1.8	2.7	2.7	2.7	3.6	3.6	3.6	3.6
135°	3.6	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	3.6
137.5°	0.9	0.9	1.8	1.8	2.7	2.7	3.6	4.6	4.6	4.6	3.6
140°	0.9	0.9	1.8	2.7	2.7	2.7	3.6	4.6	4.6	4.6	3.6
142.5°	0.9	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	3.6	3.6
145°	0.9	1.8	1.8	2.7	2.7	3.6	3.6	4.6	3.6	3.6	3.6
147.5°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	3.6	3.6
150°	0.9	1.8	1.8	2.7	3.6	3.6	3.6	4.6	3.6	3.6	3.6
152.5°	0.9	1.8	1.8	2.7	3.6	3.6	3.6	4.6	3.6	3.6	3.6
155°	1.8	1.8	1.8	2.7	3.6	3.6	3.6	4.6	3.6	3.6	4.6
157.5°	1.8	1.8	1.8	2.7	3.6	3.6	3.6	4.6	3.6	3.6	4.6
160°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	3.6	3.6	3.6	3.6
162.5°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	3.6	3.6	3.6	3.6
165°	1.8	1.8	1.8	1.8	2.7	2.7	3.6	3.6	3.6	3.6	3.6
167.5°	1.8	1.8	1.8	2.7	2.7	2.7	3.6	3.6	3.6	3.6	3.6
170°	1.8	1.8	1.8	2.7	2.7	2.7	3.6	4.6	4.6	4.6	4.6
172.5°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	4.6	4.6
175°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	4.6	4.6
177.5°	0.9	1.8	1.8	2.7	2.7	3.6	3.6	4.6	4.6	4.6	3.6
180°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	716.3	716.3	716.3
2.5°	681.6	668.8	665.2
5°	645.1	624.1	612.2
7.5°	608.6	580.3	566.6
10°	574.8	534.7	520.1
12.5°	534.7	488.2	465.3
15°	496.4	436.1	414.2
17.5°	453.5	386.0	360.4
20°	413.3	335.8	309.3
22.5°	367.7	286.5	257.3
25°	326.7	237.2	204.4
27.5°	281.0	187.0	158.8
30°	238.1	143.3	115.0
32.5°	197.1	104.9	79.4
35°	158.8	71.2	50.2
37.5°	122.3	43.8	25.5
40°	88.5	22.8	11.9
42.5°	59.3	10.9	6.4
45°	36.5	5.5	0.0
47.5°	21.0	0.0	0.0
50°	10.9	0.0	0.0
52.5°	4.6	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°	0.9	0.9	0.9
77.5°	0.9	1.8	2.7
80°	1.8	3.6	4.6
82.5°	3.6	4.6	4.6
85°	3.6	4.6	5.5
87.5°	4.6	5.5	6.4
90°	5.5	6.4	6.4
92.5°	5.5	7.3	7.3
95°	6.4	7.3	8.2
97.5°	7.3	8.2	8.2
100°	6.4	8.2	9.1
102.5°	5.5	8.2	8.2
105°	4.6	6.4	7.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.6	4.6	4.6
115°	2.7	3.6	4.6
117.5°	2.7	3.6	3.6
120°	2.7	2.7	3.6
122.5°	2.7	2.7	3.6
125°	2.7	2.7	3.6
127.5°	3.6	2.7	2.7
130°	2.7	2.7	2.7
132.5°	3.6	2.7	2.7
135°	3.6	2.7	2.7
137.5°	3.6	2.7	2.7
140°	3.6	2.7	2.7
142.5°	3.6	2.7	2.7
145°	2.7	2.7	2.7
147.5°	2.7	2.7	2.7
150°	2.7	2.7	1.8
152.5°	2.7	1.8	1.8
155°	2.7	1.8	0.9
157.5°	3.6	1.8	0.9
160°	2.7	1.8	0.9
162.5°	2.7	1.8	0.9
165°	2.7	1.8	0.0
167.5°	2.7	1.8	0.9
170°	2.7	1.8	0.9
172.5°	2.7	1.8	0.9
175°	2.7	0.9	0.9
177.5°	2.7	0.9	0.9
180°	2.7	2.7	2.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	383.2	372.3	335.8	275.6	192.5	107.7	40.1	7.3	1.8	2.7	2.7
110°	334.0	324.8	287.4	229.0	155.1	80.3	26.5	4.6	2.7	2.7	2.7







107.5°	3.6	5.5	6.4
110°	3.6	4.6	5.5



(END OF REPORT)