

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: P551381

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-93-97-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: P551381  
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-93-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

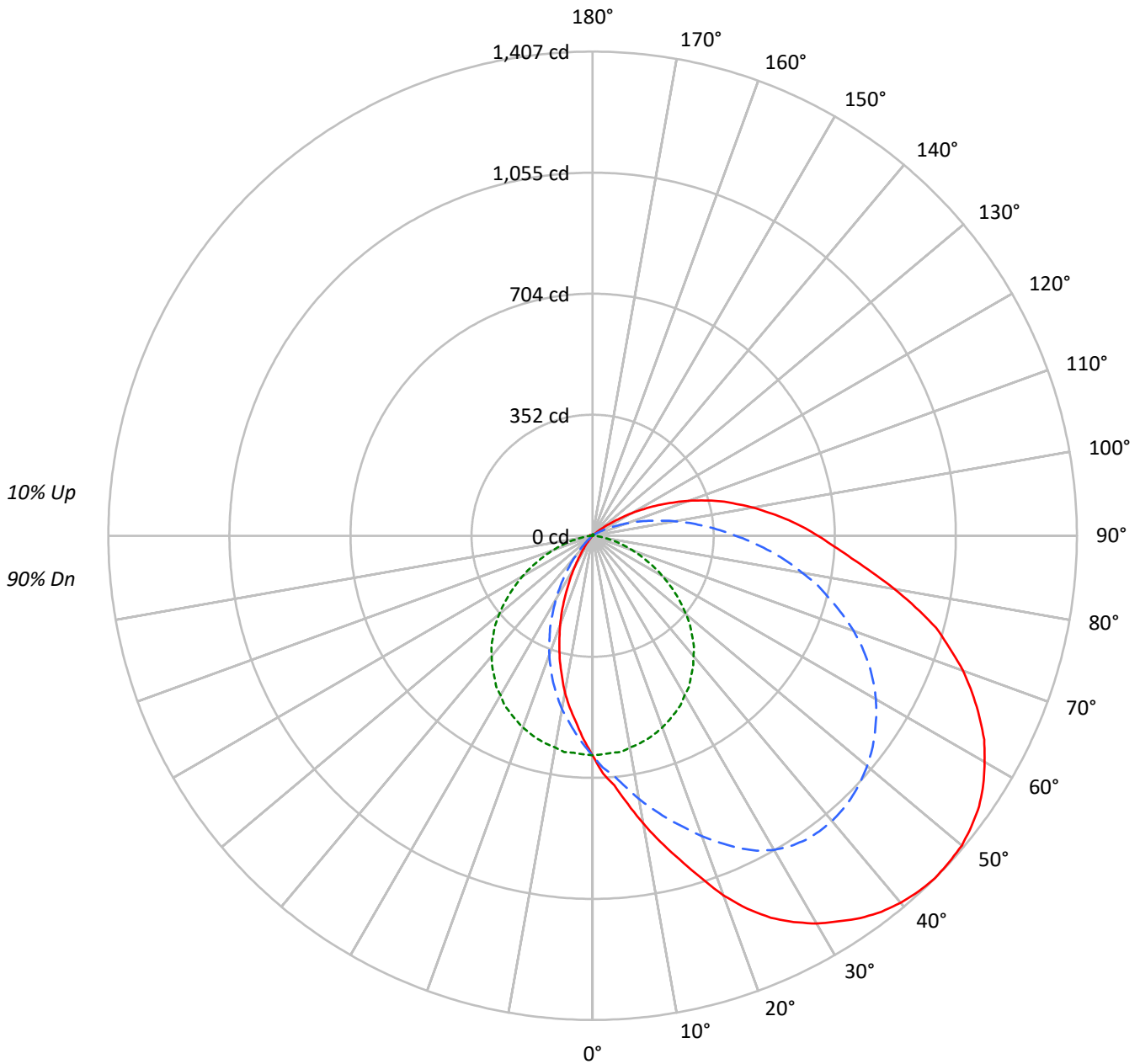
Lumens per Lamp: N/A  
Luminaire Lumens: 3154.0 lumens  
Efficiency: N/A  
Efficacy: 72.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551381

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-97-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	70	70	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	56	56	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	46	46	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	38	38	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	33	33	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	28	28	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	25	25	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	22	22	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	20	20	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	18	18	18	16

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

	0°	90°	180°
0°	6867	6867	6867
5°	7538	6767	5645
10°	8531	6684	4653
15°	9560	6599	3626
20°	10782	6492	2670
25°	11796	6367	1753
30°	12550	6200	988
35°	13202	6020	435
40°	13781	5798	105
45°	14277	5521	0
50°	14693	5152	0
55°	15010	4685	0
60°	15171	4143	0
65°	15233	3525	0
70°	15182	2874	0
75°	14990	2121	12
80°	14381	1299	66
85°	13901	620	90



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.1	1.9
10°-20°	183.0	5.8
20°-30°	296.3	9.4
30°-40°	380.6	12.1
40°-50°	430.9	13.7
50°-60°	446.4	14.2
60°-70°	421.0	13.3
70°-80°	352.8	11.2
80°-90°	255.7	8.1
90°-100°	168.1	5.3
100°-110°	97.1	3.1
110°-120°	42.8	1.4
120°-130°	11.6	0.4
130°-140°	2.7	0.1
140°-150°	1.7	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
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0°-30°	540.4	17.1
0°-40°	921.0	29.2
0°-60°	1798.3	57.0
0°-90°	2827.8	89.7
90°-120°	308.0	9.8
90°-150°	324.0	10.3
90°-180°	326.0	10.3
0°-180°	3154.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	638	638	638	638	638	
5°	728	699	633	575	545	73
15°	973	853	612	442	369	281
25°	1225	1001	567	291	182	566
35°	1356	1079	498	141	45	851
45°	1407	1068	408	32	0	1086
55°	1371	1001	294	0	0	1224
65°	1239	886	176	0	0	1226
75°	1033	715	75	1	1	1083
85°	756	518	12	3	5	645
90°	655	416	3	5	6	359
95°	562	325	2	6	7	441
105°	387	168	2	4	6	408
115°	210	56	2	2	4	211
125°	63	8	3	2	3	63
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°	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0	638.0
2.5°	691.6	690.8	688.4	684.3	678.6	668.9	660.7	653.4	643.7	635.5	620.1
5°	728.2	724.1	720.9	716.8	703.8	694.9	680.2	664.0	648.5	633.1	602.2
7.5°	786.7	780.2	775.3	763.9	746.1	725.8	703.0	687.6	677.0	633.9	581.1
10°	849.3	843.6	833.8	813.5	791.6	762.3	729.8	693.2	660.7	625.0	562.4
12.5°	911.0	902.9	889.1	863.1	832.2	795.6	750.9	707.9	661.5	619.3	540.5
15°	972.8	963.9	949.2	917.6	876.9	829.0	774.5	720.1	665.6	612.0	517.7
17.5°	1040.3	1028.1	1006.1	970.4	919.2	859.8	795.6	729.8	664.0	603.0	493.3
20°	1112.6	1095.5	1072.0	1024.0	963.9	894.0	816.8	739.6	663.2	592.5	465.7
22.5°	1172.7	1155.7	1129.7	1080.1	1007.8	922.4	834.7	746.1	659.9	580.3	439.7
25°	1224.8	1210.9	1182.5	1125.6	1049.2	952.5	851.7	750.9	655.0	567.3	412.0
27.5°	1265.4	1252.4	1220.7	1162.2	1084.2	979.3	864.7	753.4	648.5	554.3	383.6
30°	1301.2	1288.1	1250.0	1189.8	1107.7	1000.4	877.7	754.2	640.4	534.8	352.7
32.5°	1328.8	1316.6	1277.6	1213.4	1124.0	1015.1	885.0	753.4	629.9	520.9	319.4
35°	1356.4	1344.2	1298.7	1230.4	1136.2	1021.6	890.7	749.3	616.8	498.2	287.7
37.5°	1377.5	1363.7	1317.4	1241.8	1141.9	1023.2	889.9	743.6	603.0	479.5	256.0
40°	1392.2	1377.5	1328.0	1248.3	1143.5	1020.8	883.4	733.9	586.8	455.9	222.7
42.5°	1401.9	1385.7	1332.8	1258.1	1140.2	1014.3	873.7	721.7	568.9	435.6	191.0
45°	1406.8	1389.7	1333.7	1250.0	1134.5	1002.1	859.0	706.2	549.4	408.0	159.3
47.5°	1404.4	1385.7	1329.6	1241.0	1124.0	989.1	842.8	687.6	525.8	383.6	129.2
50°	1400.3	1380.8	1320.7	1229.6	1109.4	972.8	824.9	664.8	501.4	353.5	102.4
52.5°	1387.3	1367.8	1310.9	1213.4	1092.3	954.1	800.5	641.2	475.4	324.3	78.0
55°	1371.0	1353.2	1293.8	1198.7	1070.3	931.4	777.8	616.0	450.2	294.2	56.1
57.5°	1345.9	1329.6	1272.7	1175.2	1048.4	906.2	752.6	588.4	418.5	264.1	39.0
60°	1315.0	1298.7	1243.4	1148.4	1023.2	877.7	724.9	560.0	390.1	234.1	24.4
62.5°	1282.5	1267.0	1209.3	1115.0	991.5	847.7	694.9	531.5	360.0	206.4	14.6
65°	1239.4	1224.8	1172.7	1075.2	956.6	815.1	661.5	497.4	329.1	175.5	8.1
67.5°	1193.9	1180.9	1128.0	1038.6	915.9	779.4	627.4	464.1	296.6	148.7	4.1
70°	1145.1	1128.9	1080.1	989.1	874.5	738.8	590.0	429.9	265.8	122.7	0.0
72.5°	1088.2	1076.0	1028.9	942.7	826.5	695.7	551.8	392.5	231.6	97.5	0.8
75°	1033.0	1017.5	974.4	893.2	779.4	650.2	509.6	357.6	198.3	74.8	0.8
77.5°	961.4	956.6	915.9	837.1	734.7	606.3	463.2	315.3	166.6	53.6	0.8
80°	889.9	885.0	853.3	781.0	682.7	554.3	420.2	275.5	135.7	35.8	0.8
82.5°	819.2	812.7	782.6	722.5	629.9	510.4	375.5	235.7	107.3	21.9	0.8
85°	755.8	747.7	715.2	659.9	575.4	460.8	329.1	196.7	79.6	12.2	1.6
87.5°	701.4	695.7	659.9	603.0	520.1	414.5	288.5	159.3	56.1	5.7	2.4
90°	655.0	642.9	611.2	551.0	468.1	363.3	245.4	127.6	37.4	3.3	3.3
92.5°	609.5	599.0	564.0	502.3	421.8	319.4	204.0	97.5	23.6	1.6	4.1
95°	562.4	551.0	516.9	460.0	374.7	274.7	167.4	71.5	13.0	1.6	4.1
97.5°	516.1	505.5	469.7	412.9	332.4	235.7	132.5	50.4	6.5	1.6	3.3
100°	473.0	460.8	428.3	371.4	290.1	196.7	102.4	32.5	4.1	1.6	3.3
102.5°	427.5	417.7	384.4	329.1	246.3	160.1	76.4	20.3	1.6	1.6	2.4
105°	386.9	374.7	342.2	285.3	209.7	126.0	53.6	12.2	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°	251.9	242.2	213.7	165.8	106.5	49.6	14.6	2.4	2.4	2.4	2.4
115°	210.5	195.9	170.7	128.4	78.8	32.5	7.3	2.4	2.4	2.4	2.4
117.5°	168.2	156.0	138.2	97.5	52.0	21.1	4.1	2.4	2.4	2.4	2.4
120°	131.7	120.3	100.0	67.5	34.9	12.2	1.6	2.4	2.4	2.4	2.4
122.5°	94.3	85.3	67.5	43.9	21.1	5.7	2.4	2.4	3.3	3.3	2.4
125°	62.6	57.7	44.7	26.8	13.0	2.4	2.4	2.4	3.3	3.3	2.4
127.5°	40.6	36.6	26.0	15.4	5.7	2.4	2.4	3.3	3.3	3.3	2.4
130°	22.8	20.3	15.4	8.9	2.4	2.4	2.4	3.3	3.3	3.3	2.4
132.5°	13.0	12.2	8.1	1.6	2.4	2.4	2.4	3.3	3.3	3.3	3.3
135°	3.3	1.6	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	3.3
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.3	4.1	4.1	4.1	3.3
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.3	4.1	4.1	4.1	3.3
142.5°	0.8	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	3.3	3.3
145°	0.8	1.6	1.6	2.4	2.4	3.3	3.3	4.1	3.3	3.3	3.3
147.5°	1.6	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	3.3	3.3
150°	0.8	1.6	1.6	2.4	3.3	3.3	3.3	4.1	3.3	3.3	3.3
152.5°	0.8	1.6	1.6	2.4	3.3	3.3	3.3	4.1	3.3	3.3	3.3
155°	1.6	1.6	1.6	2.4	3.3	3.3	3.3	4.1	3.3	3.3	4.1
157.5°	1.6	1.6	1.6	2.4	3.3	3.3	3.3	4.1	3.3	3.3	4.1
160°	1.6	1.6	1.6	2.4	2.4	3.3	3.3	3.3	3.3	3.3	3.3
162.5°	1.6	1.6	1.6	2.4	2.4	3.3	3.3	3.3	3.3	3.3	3.3
165°	1.6	1.6	1.6	1.6	2.4	2.4	3.3	3.3	3.3	3.3	3.3
167.5°	1.6	1.6	1.6	2.4	2.4	2.4	3.3	3.3	3.3	3.3	3.3
170°	1.6	1.6	1.6	2.4	2.4	2.4	3.3	4.1	4.1	4.1	4.1
172.5°	1.6	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	4.1	4.1
175°	1.6	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	4.1	4.1
177.5°	0.8	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	4.1	3.3
180°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



TEST NUMBER: P551381

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-97-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	638.0	638.0	638.0
2.5°	607.1	595.7	592.5
5°	574.6	555.9	545.3
7.5°	542.1	516.9	504.7
10°	512.0	476.2	463.2
12.5°	476.2	434.8	414.5
15°	442.1	388.5	369.0
17.5°	403.9	343.8	321.0
20°	368.2	299.1	275.5
22.5°	327.5	255.2	229.2
25°	291.0	211.3	182.0
27.5°	250.3	166.6	141.4
30°	212.1	127.6	102.4
32.5°	175.5	93.5	70.7
35°	141.4	63.4	44.7
37.5°	108.9	39.0	22.8
40°	78.8	20.3	10.6
42.5°	52.8	9.8	5.7
45°	32.5	4.9	0.0
47.5°	18.7	0.0	0.0
50°	9.8	0.0	0.0
52.5°	4.1	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	3.3	4.1
82.5°	3.3	4.1	4.1
85°	3.3	4.1	4.9
87.5°	4.1	4.9	5.7
90°	4.9	5.7	5.7
92.5°	4.9	6.5	6.5
95°	5.7	6.5	7.3
97.5°	6.5	7.3	7.3
100°	5.7	7.3	8.1
102.5°	4.9	7.3	7.3
105°	4.1	5.7	6.5





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CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-97-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.3	4.1	4.1
115°	2.4	3.3	4.1
117.5°	2.4	3.3	3.3
120°	2.4	2.4	3.3
122.5°	2.4	2.4	3.3
125°	2.4	2.4	3.3
127.5°	3.3	2.4	2.4
130°	2.4	2.4	2.4
132.5°	3.3	2.4	2.4
135°	3.3	2.4	2.4
137.5°	3.3	2.4	2.4
140°	3.3	2.4	2.4
142.5°	3.3	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°	3.3	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°	341.3	331.6	299.1	245.4	171.5	95.9	35.8	6.5	1.6	2.4	2.4
110°	297.5	289.3	256.0	204.0	138.2	71.5	23.6	4.1	2.4	2.4	2.4







107.5°	3.3	4.9	5.7
110°	3.3	4.1	4.9



(END OF REPORT)