

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: P551307

Luminaire Tested: **FCC-X-2-LD4-2HI-35-UNV-93-86-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: P551307
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-93-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

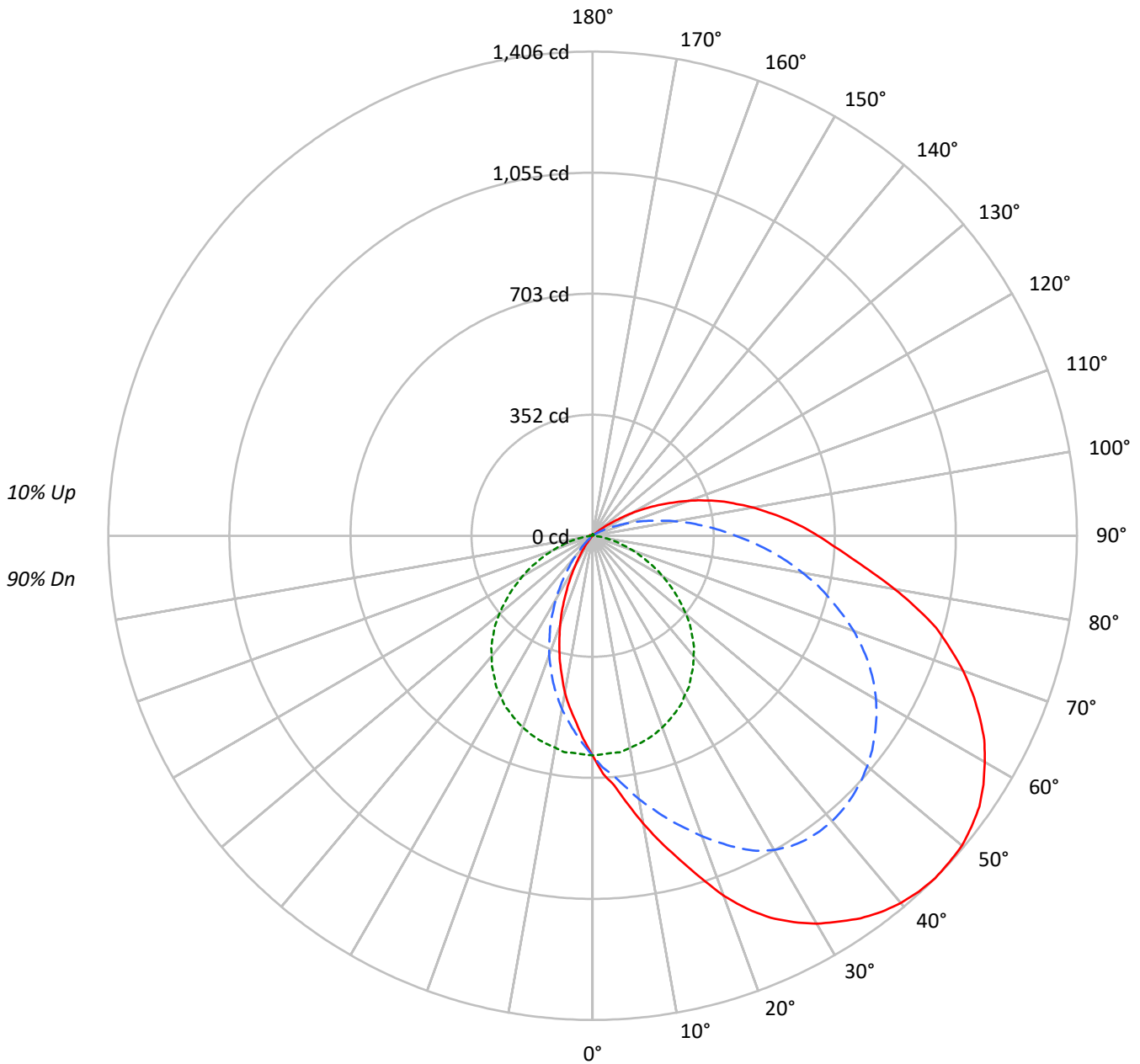
Lumens per Lamp: N/A
Luminaire Lumens: 3152.9 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (A_{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

TEST NUMBER: P551307

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-86-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°	6865	6865	6865
5°	7536	6765	5644
10°	8528	6682	4652
15°	9557	6597	3625
20°	10778	6489	2669
25°	11792	6364	1753
30°	12545	6197	988
35°	13198	6017	435
40°	13776	5797	105
45°	14273	5519	0
50°	14689	5151	0
55°	15006	4683	0
60°	15166	4141	0
65°	15228	3525	0
70°	15177	2874	0
75°	14984	2118	12
80°	14377	1295	66
85°	13897	620	90



TEST NUMBER: P551307

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	1.9
10°-20°	182.9	5.8
20°-30°	296.2	9.4
30°-40°	380.5	12.1
40°-50°	430.7	13.7
50°-60°	446.3	14.2
60°-70°	420.9	13.3
70°-80°	352.7	11.2
80°-90°	255.7	8.1
90°-100°	168.0	5.3
100°-110°	97.0	3.1
110°-120°	42.8	1.4
120°-130°	11.6	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°	0.3	0.0
0°-30°	540.2	17.1
0°-40°	920.7	29.2
0°-60°	1797.7	57.0
0°-90°	2826.9	89.7
90°-120°	307.9	9.8
90°-150°	323.8	10.3
90°-180°	326.0	10.3
0°-180°	3152.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	638	638	638	638	638	
5°	728	699	633	574	545	73
15°	972	853	612	442	369	280
25°	1224	1001	567	291	182	566
35°	1356	1079	498	141	45	850
45°	1406	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°	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8	637.8
2.5°	691.4	690.6	688.1	684.1	678.4	668.6	660.5	653.2	643.5	635.3	619.9
5°	728.0	723.9	720.6	716.6	703.6	694.6	680.0	663.8	648.3	632.9	602.0
7.5°	786.5	780.0	775.1	763.7	745.8	725.5	702.8	687.3	676.8	633.7	580.9
10°	849.0	843.3	833.6	813.3	791.3	762.1	729.6	693.0	660.5	624.8	562.2
12.5°	910.8	902.6	888.8	862.8	832.0	795.4	750.7	707.6	661.3	619.1	540.3
15°	972.5	963.6	948.9	917.3	876.6	828.7	774.3	719.8	665.4	611.8	517.5
17.5°	1039.9	1027.8	1005.8	970.1	918.9	859.6	795.4	729.6	663.8	602.8	493.2
20°	1112.2	1095.2	1071.6	1023.7	963.6	893.7	816.5	739.3	663.0	592.3	465.5
22.5°	1172.4	1155.3	1129.3	1079.8	1007.4	922.1	834.4	745.8	659.7	580.1	439.5
25°	1224.4	1210.6	1182.1	1125.2	1048.9	952.2	851.5	750.7	654.8	567.1	411.9
27.5°	1265.0	1252.0	1220.3	1161.8	1083.8	979.0	864.5	753.1	648.3	554.1	383.5
30°	1300.7	1287.7	1249.6	1189.4	1107.4	1000.1	877.5	754.0	640.2	534.6	352.6
32.5°	1328.4	1316.2	1277.2	1213.0	1123.6	1014.8	884.8	753.1	629.7	520.8	319.3
35°	1356.0	1343.8	1298.3	1230.1	1135.8	1021.3	890.4	749.1	616.7	498.0	287.6
37.5°	1377.1	1363.3	1317.0	1241.4	1141.5	1022.9	889.6	743.4	602.8	479.3	255.9
40°	1391.7	1377.1	1327.5	1247.9	1143.1	1020.4	883.1	733.6	586.6	455.8	222.6
42.5°	1401.5	1385.2	1332.4	1257.7	1139.9	1013.9	873.4	721.5	568.7	435.5	190.9
45°	1406.4	1389.3	1333.2	1249.6	1134.2	1001.8	858.8	706.0	549.2	407.9	159.2
47.5°	1403.9	1385.2	1329.2	1240.6	1123.6	988.8	842.5	687.3	525.7	383.5	129.2
50°	1399.9	1380.4	1320.2	1229.2	1109.0	972.5	824.6	664.6	501.3	353.4	102.4
52.5°	1386.9	1367.4	1310.5	1213.0	1091.9	953.8	800.3	641.0	475.3	324.2	78.0
55°	1370.6	1352.7	1293.4	1198.4	1070.0	931.1	777.5	615.8	450.1	294.1	56.1
57.5°	1345.4	1329.2	1272.3	1174.8	1048.1	905.9	752.3	588.2	418.4	264.0	39.0
60°	1314.6	1298.3	1243.1	1148.0	1022.9	877.5	724.7	559.8	390.0	234.0	24.4
62.5°	1282.1	1266.6	1208.9	1114.7	991.2	847.4	694.6	531.3	359.9	206.4	14.6
65°	1239.0	1224.4	1172.4	1074.9	956.3	814.9	661.3	497.2	329.0	175.5	8.1
67.5°	1193.5	1180.5	1127.7	1038.3	915.6	779.1	627.2	463.9	296.5	148.7	4.1
70°	1144.7	1128.5	1079.8	988.8	874.2	738.5	589.8	429.8	265.7	122.7	0.0
72.5°	1087.9	1075.7	1028.6	942.4	826.3	695.5	551.7	392.4	231.5	97.5	0.8
75°	1032.6	1017.2	974.1	892.9	779.1	650.0	509.4	357.5	198.2	74.7	0.8
77.5°	961.1	956.3	915.6	836.8	734.5	606.1	463.1	315.2	166.6	53.6	0.8
80°	889.6	884.8	853.1	780.8	682.5	554.1	420.0	275.4	135.7	35.7	0.8
82.5°	819.0	812.5	782.4	722.3	629.7	510.2	375.4	235.6	107.2	21.9	0.8
85°	755.6	747.5	715.0	659.7	575.2	460.7	329.0	196.6	79.6	12.2	1.6
87.5°	701.1	695.5	659.7	602.8	520.0	414.4	288.4	159.2	56.1	5.7	2.4
90°	654.8	642.7	611.0	550.8	468.0	363.2	245.4	127.6	37.4	3.2	3.2
92.5°	609.3	598.8	563.8	502.1	421.7	319.3	203.9	97.5	23.6	1.6	4.1
95°	562.2	550.8	516.7	459.8	374.5	274.6	167.4	71.5	13.0	1.6	4.1
97.5°	515.9	505.3	469.6	412.7	332.3	235.6	132.4	50.4	6.5	1.6	3.2
100°	472.8	460.7	428.2	371.3	290.0	196.6	102.4	32.5	4.1	1.6	3.2
102.5°	427.4	417.6	384.3	329.0	246.2	160.1	76.4	20.3	1.6	1.6	2.4
105°	386.7	374.5	342.0	285.2	209.6	125.9	53.6	12.2	1.6	1.6	2.4



TEST NUMBER: P551307

CATALOG NUMBER: FCC-X-2-LD4-2HI-35-UNV-93-86-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	251.9	242.1	213.7	165.7	106.4	49.6	14.6	2.4	2.4	2.4	2.4
115°	210.4	195.8	170.6	128.4	78.8	32.5	7.3	2.4	2.4	2.4	2.4
117.5°	168.2	156.0	138.1	97.5	52.0	21.1	4.1	2.4	2.4	2.4	2.4
120°	131.6	120.2	99.9	67.4	34.9	12.2	1.6	2.4	2.4	2.4	2.4
122.5°	94.2	85.3	67.4	43.9	21.1	5.7	2.4	2.4	3.2	3.2	2.4
125°	62.6	57.7	44.7	26.8	13.0	2.4	2.4	2.4	3.2	3.2	2.4
127.5°	40.6	36.6	26.0	15.4	5.7	2.4	2.4	3.2	3.2	3.2	2.4
130°	22.7	20.3	15.4	8.9	2.4	2.4	2.4	3.2	3.2	3.2	2.4
132.5°	13.0	12.2	8.1	1.6	2.4	2.4	2.4	3.2	3.2	3.2	3.2
135°	3.2	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	3.2
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.1	4.1	4.1	3.2
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.2	4.1	4.1	4.1	3.2
142.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	3.2	3.2
145°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.1	3.2	3.2	3.2
147.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	3.2	3.2
150°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	4.1	3.2	3.2	3.2
152.5°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	4.1	3.2	3.2	3.2
155°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	4.1	3.2	3.2	4.1
157.5°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	4.1	3.2	3.2	4.1
160°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2	3.2
162.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2	3.2
165°	1.6	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2
167.5°	1.6	1.6	1.6	2.4	2.4	2.4	3.2	3.2	3.2	3.2	3.2
170°	1.6	1.6	1.6	2.4	2.4	2.4	3.2	4.1	4.1	4.1	4.1
172.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	4.1	4.1
175°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	4.1	4.1
177.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.1	4.1	4.1	3.2
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°	637.8	637.8	637.8
2.5°	606.9	595.5	592.3
5°	574.4	555.7	545.2
7.5°	541.9	516.7	504.5
10°	511.8	476.1	463.1
12.5°	476.1	434.7	414.4
15°	442.0	388.4	368.9
17.5°	403.8	343.7	320.9
20°	368.0	299.0	275.4
22.5°	327.4	255.1	229.1
25°	290.9	211.2	182.0
27.5°	250.2	166.6	141.4
30°	212.1	127.6	102.4
32.5°	175.5	93.4	70.7
35°	141.4	63.4	44.7
37.5°	108.9	39.0	22.7
40°	78.8	20.3	10.6
42.5°	52.8	9.7	5.7
45°	32.5	4.9	0.0
47.5°	18.7	0.0	0.0
50°	9.7	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	3.2	4.1
82.5°	3.2	4.1	4.1
85°	3.2	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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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.2	4.1	4.1
115°	2.4	3.2	4.1
117.5°	2.4	3.2	3.2
120°	2.4	2.4	3.2
122.5°	2.4	2.4	3.2
125°	2.4	2.4	3.2
127.5°	3.2	2.4	2.4
130°	2.4	2.4	2.4
132.5°	3.2	2.4	2.4
135°	3.2	2.4	2.4
137.5°	3.2	2.4	2.4
140°	3.2	2.4	2.4
142.5°	3.2	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°	3.2	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°	341.2	331.5	299.0	245.4	171.4	95.9	35.7	6.5	1.6	2.4	2.4
110°	297.4	289.2	255.9	203.9	138.1	71.5	23.6	4.1	2.4	2.4	2.4





107.5°	3.2	4.9	5.7
110°	3.2	4.1	4.9



(END OF REPORT)