

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: P551382

Luminaire Tested: **FCC-X-2-LD4-2HI-40-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: P551382
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
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,
AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

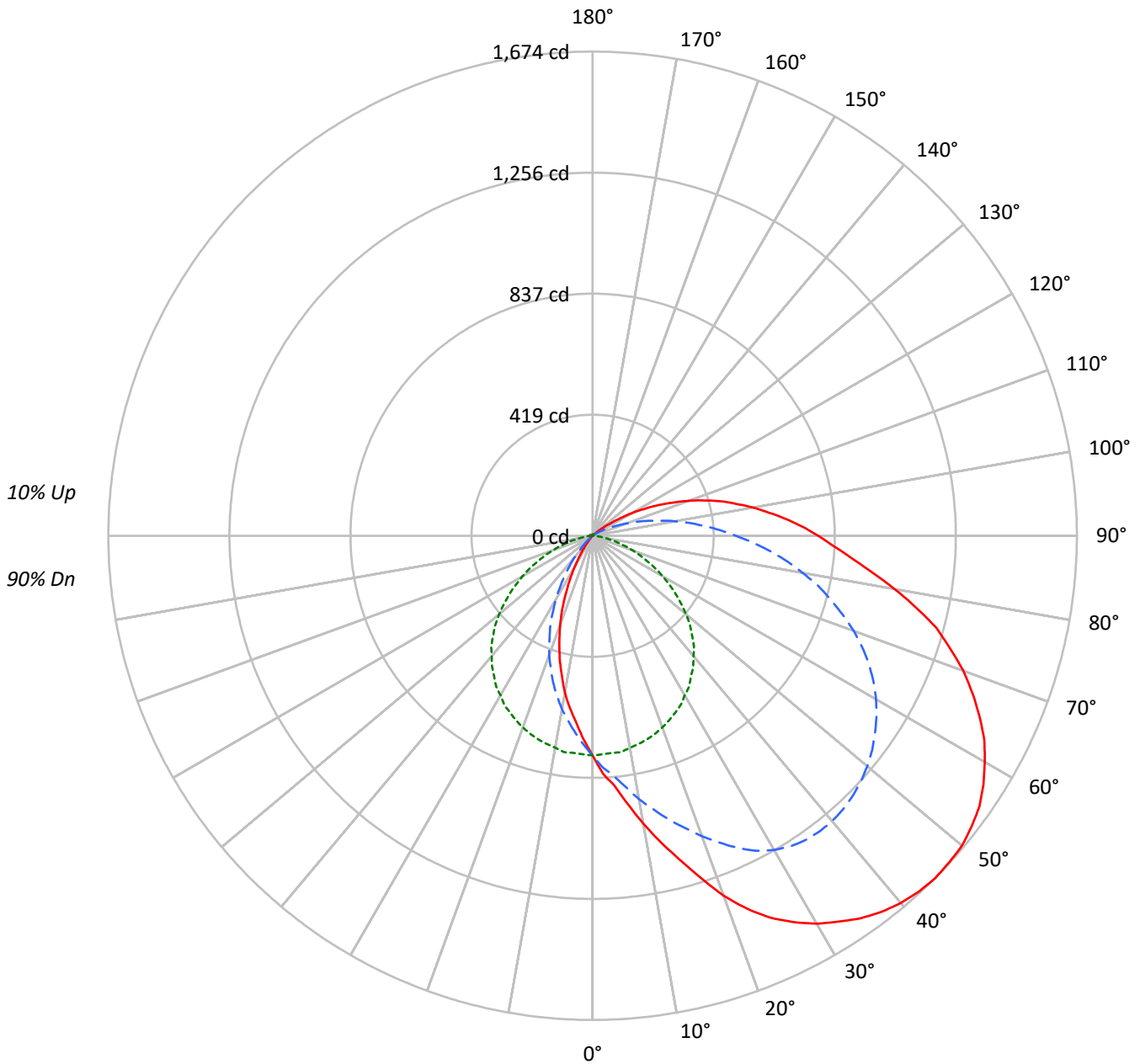
Lumens per Lamp: N/A
Luminaire Lumens: 3754.0 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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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CATALOG NUMBER: FCC-X-2-LD4-2HI-40-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°	8173	8173	8173
5°	8972	8054	6720
10°	10153	7955	5538
15°	11379	7854	4316
20°	12834	7726	3178
25°	14039	7577	2087
30°	14937	7379	1176
35°	15714	7165	518
40°	16402	6902	125
45°	16992	6571	0
50°	17489	6133	0
55°	17867	5576	0
60°	18056	4930	0
65°	18131	4196	0
70°	18071	3423	0
75°	17841	2524	15
80°	17117	1545	78
85°	16545	737	107



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	1.9
10°-20°	217.8	5.8
20°-30°	352.7	9.4
30°-40°	453.0	12.1
40°-50°	512.8	13.7
50°-60°	531.3	14.2
60°-70°	501.1	13.3
70°-80°	419.9	11.2
80°-90°	304.4	8.1
90°-100°	200.1	5.3
100°-110°	115.5	3.1
110°-120°	51.0	1.4
120°-130°	13.8	0.4
130°-140°	3.2	0.1
140°-150°	2.1	0.1
150°-160°	1.5	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	643.2	17.1
0°-40°	1096.2	29.2
0°-60°	2140.4	57.0
0°-90°	3365.8	89.7
90°-120°	366.6	9.8
90°-150°	385.6	10.3
90°-180°	388.0	10.3
0°-180°	3754.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	759	759	759	759	759	
5°	867	832	754	684	649	87
15°	1158	1015	728	526	439	334
25°	1458	1191	675	346	217	674
35°	1614	1284	593	168	53	1013
45°	1674	1272	486	39	0	1293
55°	1632	1191	350	0	0	1457
65°	1475	1054	209	0	0	1460
75°	1230	851	89	1	1	1290
85°	900	617	14	4	6	768
90°	780	495	4	6	7	428
95°	669	386	2	7	9	525
105°	460	200	2	5	8	486
115°	250	66	3	3	5	251
125°	74	9	4	3	4	74
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°	759.3	759.3	759.3	759.3	759.3	759.3	759.3	759.3	759.3	759.3	759.3
2.5°	823.2	822.2	819.3	814.5	807.7	796.1	786.4	777.7	766.1	756.4	738.1
5°	866.7	861.9	858.0	853.2	837.7	827.1	809.6	790.3	771.9	753.5	716.8
7.5°	936.4	928.6	922.8	909.3	888.0	863.8	836.7	818.4	805.8	754.5	691.6
10°	1010.8	1004.1	992.5	968.3	942.2	907.3	868.7	825.1	786.4	743.9	669.4
12.5°	1084.4	1074.7	1058.2	1027.3	990.5	947.0	893.8	842.5	787.4	737.1	643.3
15°	1157.9	1147.2	1129.8	1092.1	1043.7	986.7	921.9	857.0	792.2	728.4	616.2
17.5°	1238.2	1223.7	1197.5	1155.0	1094.0	1023.4	947.0	868.7	790.3	717.7	587.2
20°	1324.3	1303.9	1275.9	1218.8	1147.2	1064.0	972.2	880.3	789.3	705.2	554.3
22.5°	1395.8	1375.5	1344.6	1285.6	1199.5	1097.9	993.4	888.0	785.5	690.7	523.3
25°	1457.7	1441.3	1407.4	1339.7	1248.8	1133.7	1013.7	893.8	779.7	675.2	490.4
27.5°	1506.1	1490.6	1452.9	1383.3	1290.4	1165.6	1029.2	896.7	771.9	659.7	456.6
30°	1548.7	1533.2	1487.7	1416.2	1318.5	1190.8	1044.7	897.7	762.2	636.5	419.8
32.5°	1581.6	1567.1	1520.6	1444.2	1337.8	1208.2	1053.4	896.7	749.7	620.1	380.2
35°	1614.5	1599.9	1545.8	1464.5	1352.3	1215.9	1060.2	891.9	734.2	593.0	342.4
37.5°	1639.6	1623.2	1568.0	1478.1	1359.1	1217.9	1059.2	885.1	717.7	570.7	304.7
40°	1657.0	1639.6	1580.6	1485.8	1361.0	1215.0	1051.5	873.5	698.4	542.7	265.0
42.5°	1668.6	1649.3	1586.4	1497.4	1357.1	1207.2	1039.9	859.0	677.1	518.5	227.3
45°	1674.4	1654.1	1587.4	1487.7	1350.4	1192.7	1022.5	840.6	653.9	485.6	189.6
47.5°	1671.5	1649.3	1582.5	1477.1	1337.8	1177.2	1003.1	818.4	625.9	456.6	153.8
50°	1666.7	1643.5	1571.9	1463.6	1320.4	1157.9	981.8	791.3	596.8	420.8	121.9
52.5°	1651.2	1628.0	1560.3	1444.2	1300.1	1135.6	952.8	763.2	565.9	386.0	92.9
55°	1631.9	1610.6	1540.0	1426.8	1274.0	1108.5	925.7	733.2	535.9	350.2	66.7
57.5°	1601.9	1582.5	1514.8	1398.7	1247.8	1078.6	895.7	700.3	498.2	314.4	46.4
60°	1565.1	1545.8	1480.0	1366.8	1217.9	1044.7	862.8	666.5	464.3	278.6	29.0
62.5°	1526.4	1508.0	1439.4	1327.2	1180.1	1008.9	827.1	632.6	428.5	245.7	17.4
65°	1475.2	1457.7	1395.8	1279.8	1138.5	970.2	787.4	592.0	391.8	208.9	9.7
67.5°	1421.0	1405.5	1342.6	1236.2	1090.2	927.7	746.8	552.3	353.1	177.0	4.8
70°	1363.0	1343.6	1285.6	1177.2	1040.8	879.3	702.3	511.7	316.3	146.1	0.0
72.5°	1295.2	1280.7	1224.6	1122.1	983.8	828.0	656.8	467.2	275.7	116.1	1.0
75°	1229.5	1211.1	1159.8	1063.1	927.7	773.9	606.5	425.6	236.0	89.0	1.0
77.5°	1144.3	1138.5	1090.2	996.3	874.5	721.6	551.4	375.3	198.3	63.8	1.0
80°	1059.2	1053.4	1015.7	929.6	812.5	659.7	500.1	327.9	161.5	42.6	1.0
82.5°	975.1	967.3	931.5	859.9	749.7	607.5	446.9	280.5	127.7	26.1	1.0
85°	899.6	889.9	851.2	785.5	684.9	548.5	391.8	234.1	94.8	14.5	1.9
87.5°	834.8	828.0	785.5	717.7	619.1	493.3	343.4	189.6	66.7	6.8	2.9
90°	779.7	765.1	727.4	655.8	557.2	432.4	292.1	151.9	44.5	3.9	3.9
92.5°	725.5	712.9	671.3	597.8	502.0	380.2	242.8	116.1	28.1	1.9	4.8
95°	669.4	655.8	615.2	547.5	445.9	327.0	199.3	85.1	15.5	1.9	4.8
97.5°	614.2	601.7	559.1	491.4	395.6	280.5	157.7	60.0	7.7	1.9	3.9
100°	563.0	548.5	509.8	442.1	345.3	234.1	121.9	38.7	4.8	1.9	3.9
102.5°	508.8	497.2	457.5	391.8	293.1	190.6	90.9	24.2	1.9	1.9	2.9
105°	460.4	445.9	407.2	339.5	249.6	149.9	63.8	14.5	1.9	1.9	2.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	299.9	288.3	254.4	197.3	126.7	59.0	17.4	2.9	2.9	2.9	2.9
115°	250.5	233.1	203.1	152.8	93.8	38.7	8.7	2.9	2.9	2.9	2.9
117.5°	200.2	185.7	164.4	116.1	61.9	25.2	4.8	2.9	2.9	2.9	2.9
120°	156.7	143.2	119.0	80.3	41.6	14.5	1.9	2.9	2.9	2.9	2.9
122.5°	112.2	101.6	80.3	52.2	25.2	6.8	2.9	2.9	3.9	3.9	2.9
125°	74.5	68.7	53.2	31.9	15.5	2.9	2.9	2.9	3.9	3.9	2.9
127.5°	48.4	43.5	31.0	18.4	6.8	2.9	2.9	3.9	3.9	3.9	2.9
130°	27.1	24.2	18.4	10.6	2.9	2.9	2.9	3.9	3.9	3.9	2.9
132.5°	15.5	14.5	9.7	1.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9
135°	3.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9
137.5°	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8	4.8	3.9
140°	1.0	1.0	1.9	2.9	2.9	2.9	3.9	4.8	4.8	4.8	3.9
142.5°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9	3.9
145°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	3.9	3.9	3.9
147.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9	3.9
150°	1.0	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	3.9
152.5°	1.0	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	3.9
155°	1.9	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	4.8
157.5°	1.9	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	4.8
160°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
162.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
165°	1.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9
167.5°	1.9	1.9	1.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9
170°	1.9	1.9	1.9	2.9	2.9	2.9	3.9	4.8	4.8	4.8	4.8
172.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	4.8
175°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	4.8
177.5°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	3.9
180°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	759.3	759.3	759.3
2.5°	722.6	709.0	705.2
5°	683.9	661.6	649.1
7.5°	645.2	615.2	600.7
10°	609.4	566.8	551.4
12.5°	566.8	517.5	493.3
15°	526.2	462.4	439.2
17.5°	480.8	409.2	382.1
20°	438.2	356.0	327.9
22.5°	389.8	303.7	272.8
25°	346.3	251.5	216.7
27.5°	297.9	198.3	168.3
30°	252.5	151.9	121.9
32.5°	208.9	111.2	84.2
35°	168.3	75.5	53.2
37.5°	129.6	46.4	27.1
40°	93.8	24.2	12.6
42.5°	62.9	11.6	6.8
45°	38.7	5.8	0.0
47.5°	22.2	0.0	0.0
50°	11.6	0.0	0.0
52.5°	4.8	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°	1.0	1.0	1.0
77.5°	1.0	1.9	2.9
80°	1.9	3.9	4.8
82.5°	3.9	4.8	4.8
85°	3.9	4.8	5.8
87.5°	4.8	5.8	6.8
90°	5.8	6.8	6.8
92.5°	5.8	7.7	7.7
95°	6.8	7.7	8.7
97.5°	7.7	8.7	8.7
100°	6.8	8.7	9.7
102.5°	5.8	8.7	8.7
105°	4.8	6.8	7.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.9	4.8	4.8
115°	2.9	3.9	4.8
117.5°	2.9	3.9	3.9
120°	2.9	2.9	3.9
122.5°	2.9	2.9	3.9
125°	2.9	2.9	3.9
127.5°	3.9	2.9	2.9
130°	2.9	2.9	2.9
132.5°	3.9	2.9	2.9
135°	3.9	2.9	2.9
137.5°	3.9	2.9	2.9
140°	3.9	2.9	2.9
142.5°	3.9	2.9	2.9
145°	2.9	2.9	2.9
147.5°	2.9	2.9	2.9
150°	2.9	2.9	1.9
152.5°	2.9	1.9	1.9
155°	2.9	1.9	1.0
157.5°	3.9	1.9	1.0
160°	2.9	1.9	1.0
162.5°	2.9	1.9	1.0
165°	2.9	1.9	0.0
167.5°	2.9	1.9	1.0
170°	2.9	1.9	1.0
172.5°	2.9	1.9	1.0
175°	2.9	1.0	1.0
177.5°	2.9	1.0	1.0
180°	2.9	2.9	2.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	406.3	394.7	356.0	292.1	204.1	114.1	42.6	7.7	1.9	2.9	2.9
110°	354.0	344.4	304.7	242.8	164.4	85.1	28.1	4.8	2.9	2.9	2.9





107.5°	3.9	5.8	6.8
110°	3.9	4.8	5.8



(END OF REPORT)