

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: P551421

Luminaire Tested: **FCC-X-2-LD4-2HI-50-UNV-82-87-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: P551421  
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-50-UNV-82-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

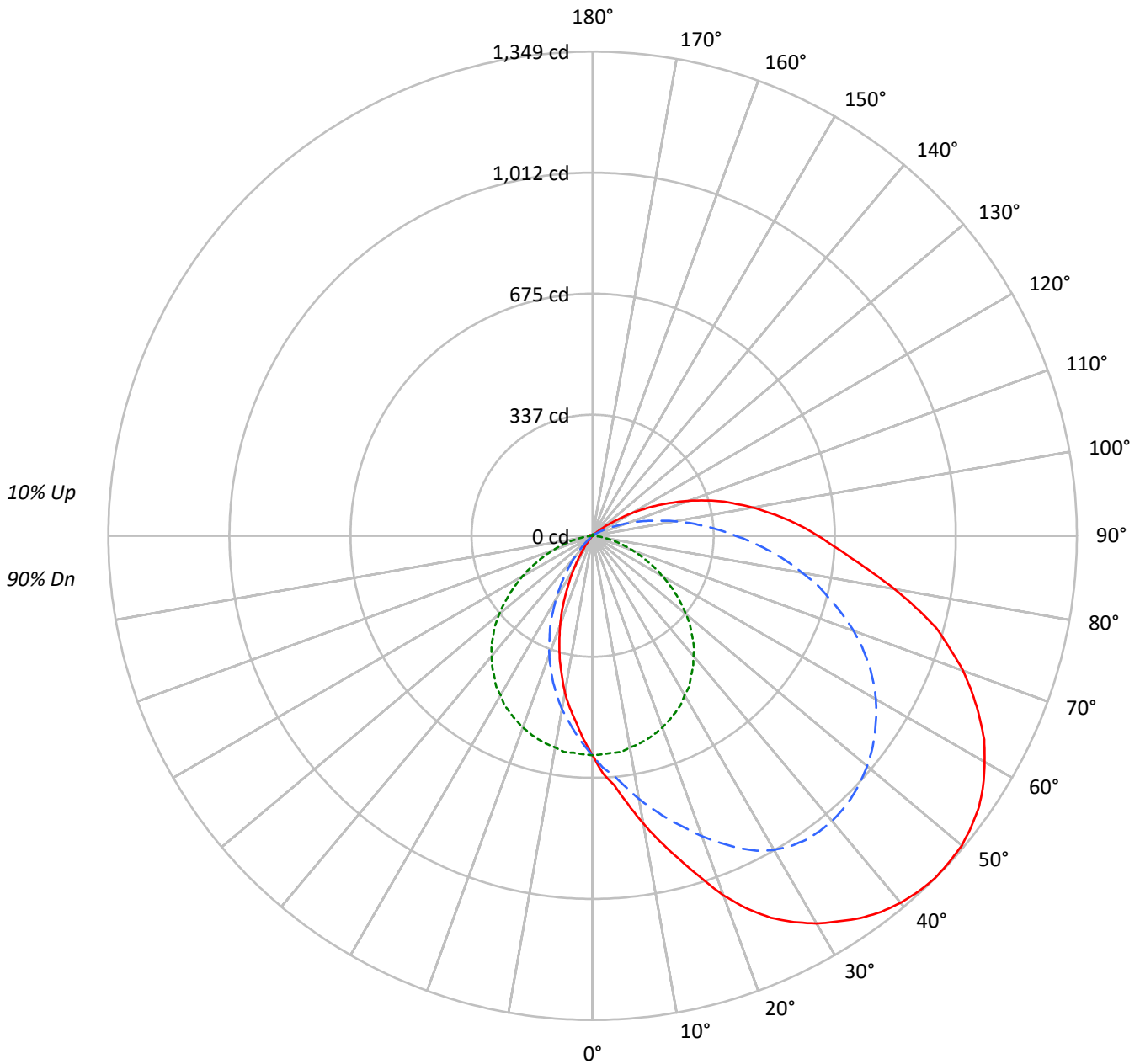
Lumens per Lamp: N/A  
Luminaire Lumens: 3024.0 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551421

CATALOG NUMBER: FCC-X-2-LD4-2HI-50-UNV-82-87-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°	6584	6584	6584
5°	7228	6488	5413
10°	8179	6408	4462
15°	9166	6326	3477
20°	10337	6223	2560
25°	11310	6104	1681
30°	12032	5943	947
35°	12658	5772	418
40°	13212	5559	100
45°	13688	5293	0
50°	14088	4941	0
55°	14392	4492	0
60°	14546	3971	0
65°	14605	3380	0
70°	14556	2757	0
75°	14372	2033	12
80°	13788	1244	63
85°	13329	595	86



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.6	1.9
10°-20°	175.4	5.8
20°-30°	284.1	9.4
30°-40°	364.9	12.1
40°-50°	413.1	13.7
50°-60°	428.0	14.2
60°-70°	403.6	13.3
70°-80°	338.3	11.2
80°-90°	245.2	8.1
90°-100°	161.2	5.3
100°-110°	93.1	3.1
110°-120°	41.1	1.4
120°-130°	11.1	0.4
130°-140°	2.5	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°	518.1	17.1
0°-40°	883.1	29.2
0°-60°	1724.2	57.0
0°-90°	2711.3	89.7
90°-120°	295.3	9.8
90°-150°	310.6	10.3
90°-180°	313.0	10.4
0°-180°	3024.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	612	612	612	612	612	
5°	698	670	607	551	523	70
15°	933	818	587	424	354	269
25°	1174	960	544	279	174	543
35°	1300	1034	478	136	43	816
45°	1349	1024	391	31	0	1041
55°	1314	960	282	0	0	1174
65°	1188	849	168	0	0	1176
75°	990	685	72	1	1	1039
85°	725	497	12	3	5	619
90°	628	399	3	5	6	344
95°	539	311	2	6	7	423
105°	371	161	2	4	6	391
115°	202	53	2	2	4	202
125°	60	7	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°	611.7	611.7	611.7	611.7	611.7	611.7	611.7	611.7	611.7	611.7	611.7
2.5°	663.1	662.3	660.0	656.1	650.6	641.3	633.5	626.5	617.1	609.3	594.5
5°	698.2	694.3	691.2	687.3	674.8	666.2	652.2	636.6	621.8	607.0	577.4
7.5°	754.3	748.0	743.4	732.5	715.3	695.8	674.0	659.2	649.1	607.8	557.1
10°	814.3	808.8	799.5	780.0	759.0	730.9	699.7	664.7	633.5	599.2	539.2
12.5°	873.5	865.7	852.5	827.5	797.9	762.9	720.0	678.7	634.3	593.8	518.2
15°	932.7	924.1	910.1	879.7	840.8	794.8	742.6	690.4	638.2	586.7	496.4
17.5°	997.4	985.7	964.7	930.4	881.3	824.4	762.9	699.7	636.6	578.2	473.0
20°	1066.7	1050.4	1027.8	981.8	924.1	857.1	783.1	709.1	635.8	568.0	446.5
22.5°	1124.4	1108.0	1083.1	1035.6	966.2	884.4	800.3	715.3	632.7	556.4	421.6
25°	1174.3	1161.0	1133.8	1079.2	1006.0	913.2	816.6	720.0	628.0	543.9	395.1
27.5°	1213.2	1200.8	1170.4	1114.3	1039.5	939.0	829.1	722.3	621.8	531.4	367.8
30°	1247.5	1235.1	1198.4	1140.8	1062.1	959.2	841.6	723.1	614.0	512.7	338.2
32.5°	1274.0	1262.3	1224.9	1163.4	1077.7	973.2	848.6	722.3	603.9	499.5	306.2
35°	1300.5	1288.8	1245.2	1179.7	1089.3	979.5	854.0	718.4	591.4	477.7	275.8
37.5°	1320.8	1307.5	1263.1	1190.6	1094.8	981.0	853.2	713.0	578.2	459.7	245.5
40°	1334.8	1320.8	1273.2	1196.9	1096.4	978.7	847.0	703.6	562.6	437.1	213.5
42.5°	1344.1	1328.6	1277.9	1206.2	1093.2	972.5	837.7	691.9	545.4	417.7	183.1
45°	1348.8	1332.5	1278.7	1198.4	1087.8	960.8	823.6	677.1	526.7	391.2	152.7
47.5°	1346.5	1328.6	1274.8	1189.9	1077.7	948.3	808.0	659.2	504.2	367.8	123.9
50°	1342.6	1323.9	1266.2	1179.0	1063.6	932.7	790.9	637.4	480.8	339.0	98.2
52.5°	1330.1	1311.4	1256.9	1163.4	1047.3	914.8	767.5	614.8	455.8	310.9	74.8
55°	1314.5	1297.4	1240.5	1149.3	1026.2	893.0	745.7	590.6	431.7	282.1	53.8
57.5°	1290.4	1274.8	1220.2	1126.7	1005.2	868.8	721.6	564.2	401.3	253.2	37.4
60°	1260.8	1245.2	1192.2	1101.0	981.0	841.6	695.1	536.9	374.0	224.4	23.4
62.5°	1229.6	1214.8	1159.5	1069.1	950.6	812.7	666.2	509.6	345.2	197.9	14.0
65°	1188.3	1174.3	1124.4	1030.9	917.1	781.6	634.3	476.9	315.6	168.3	7.8
67.5°	1144.7	1132.2	1081.5	995.8	878.2	747.3	601.6	444.9	284.4	142.6	3.9
70°	1097.9	1082.3	1035.6	948.3	838.4	708.3	565.7	412.2	254.8	117.7	0.0
72.5°	1043.4	1031.7	986.5	903.9	792.5	667.0	529.1	376.4	222.1	93.5	0.8
75°	990.4	975.6	934.3	856.4	747.3	623.4	488.6	342.9	190.1	71.7	0.8
77.5°	921.8	917.1	878.2	802.6	704.4	581.3	444.2	302.3	159.7	51.4	0.8
80°	853.2	848.6	818.2	748.8	654.5	531.4	402.9	264.2	130.1	34.3	0.8
82.5°	785.4	779.2	750.4	692.7	603.9	489.3	360.0	226.0	102.9	21.0	0.8
85°	724.7	716.9	685.7	632.7	551.7	441.8	315.6	188.6	76.4	11.7	1.6
87.5°	672.5	667.0	632.7	578.2	498.7	397.4	276.6	152.7	53.8	5.5	2.3
90°	628.0	616.4	586.0	528.3	448.8	348.3	235.3	122.3	35.8	3.1	3.1
92.5°	584.4	574.3	540.8	481.6	404.4	306.2	195.6	93.5	22.6	1.6	3.9
95°	539.2	528.3	495.6	441.0	359.2	263.4	160.5	68.6	12.5	1.6	3.9
97.5°	494.8	484.7	450.4	395.8	318.7	226.0	127.0	48.3	6.2	1.6	3.1
100°	453.5	441.8	410.6	356.1	278.2	188.6	98.2	31.2	3.9	1.6	3.1
102.5°	409.9	400.5	368.6	315.6	236.1	153.5	73.2	19.5	1.6	1.6	2.3
105°	370.9	359.2	328.0	273.5	201.0	120.8	51.4	11.7	1.6	1.6	2.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	241.6	232.2	204.9	159.0	102.1	47.5	14.0	2.3	2.3	2.3	2.3
115°	201.8	187.8	163.6	123.1	75.6	31.2	7.0	2.3	2.3	2.3	2.3
117.5°	161.3	149.6	132.5	93.5	49.9	20.3	3.9	2.3	2.3	2.3	2.3
120°	126.2	115.3	95.8	64.7	33.5	11.7	1.6	2.3	2.3	2.3	2.3
122.5°	90.4	81.8	64.7	42.1	20.3	5.5	2.3	2.3	3.1	3.1	2.3
125°	60.0	55.3	42.9	25.7	12.5	2.3	2.3	2.3	3.1	3.1	2.3
127.5°	39.0	35.1	24.9	14.8	5.5	2.3	2.3	3.1	3.1	3.1	2.3
130°	21.8	19.5	14.8	8.6	2.3	2.3	2.3	3.1	3.1	3.1	2.3
132.5°	12.5	11.7	7.8	1.6	2.3	2.3	2.3	3.1	3.1	3.1	3.1
135°	3.1	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1
137.5°	0.8	0.8	1.6	1.6	2.3	2.3	3.1	3.9	3.9	3.9	3.1
140°	0.8	0.8	1.6	2.3	2.3	2.3	3.1	3.9	3.9	3.9	3.1
142.5°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1	3.1
145°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.1	3.1	3.1
147.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.1	3.1
150°	0.8	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.1
152.5°	0.8	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.1
155°	1.6	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.9
157.5°	1.6	1.6	1.6	2.3	3.1	3.1	3.1	3.9	3.1	3.1	3.9
160°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
162.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.6	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.1	3.1	3.1
167.5°	1.6	1.6	1.6	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1
170°	1.6	1.6	1.6	2.3	2.3	2.3	3.1	3.9	3.9	3.9	3.9
172.5°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.9
175°	1.6	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.9
177.5°	0.8	1.6	1.6	2.3	2.3	3.1	3.1	3.9	3.9	3.9	3.1
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	611.7	611.7	611.7
2.5°	582.1	571.2	568.0
5°	550.9	533.0	522.9
7.5°	519.7	495.6	483.9
10°	490.9	456.6	444.2
12.5°	456.6	416.9	397.4
15°	423.9	372.5	353.8
17.5°	387.3	329.6	307.8
20°	353.0	286.8	264.2
22.5°	314.0	244.7	219.7
25°	279.0	202.6	174.5
27.5°	240.0	159.7	135.6
30°	203.4	122.3	98.2
32.5°	168.3	89.6	67.8
35°	135.6	60.8	42.9
37.5°	104.4	37.4	21.8
40°	75.6	19.5	10.1
42.5°	50.6	9.4	5.5
45°	31.2	4.7	0.0
47.5°	17.9	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	2.3
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	6.2	6.2
95°	5.5	6.2	7.0
97.5°	6.2	7.0	7.0
100°	5.5	7.0	7.8
102.5°	4.7	7.0	7.0
105°	3.9	5.5	6.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.1	3.9	3.9
115°	2.3	3.1	3.9
117.5°	2.3	3.1	3.1
120°	2.3	2.3	3.1
122.5°	2.3	2.3	3.1
125°	2.3	2.3	3.1
127.5°	3.1	2.3	2.3
130°	2.3	2.3	2.3
132.5°	3.1	2.3	2.3
135°	3.1	2.3	2.3
137.5°	3.1	2.3	2.3
140°	3.1	2.3	2.3
142.5°	3.1	2.3	2.3
145°	2.3	2.3	2.3
147.5°	2.3	2.3	2.3
150°	2.3	2.3	1.6
152.5°	2.3	1.6	1.6
155°	2.3	1.6	0.8
157.5°	3.1	1.6	0.8
160°	2.3	1.6	0.8
162.5°	2.3	1.6	0.8
165°	2.3	1.6	0.0
167.5°	2.3	1.6	0.8
170°	2.3	1.6	0.8
172.5°	2.3	1.6	0.8
175°	2.3	0.8	0.8
177.5°	2.3	0.8	0.8
180°	2.3	2.3	2.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	327.3	317.9	286.8	235.3	164.4	91.9	34.3	6.2	1.6	2.3	2.3
110°	285.2	277.4	245.5	195.6	132.5	68.6	22.6	3.9	2.3	2.3	2.3







107.5°	3.1	4.7	5.5
110°	3.1	3.9	4.7



(END OF REPORT)