

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: P551209

Luminaire Tested: **FCC-X-2-LD4-2HI-30-UNV-81-85-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: P551209  
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-81-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

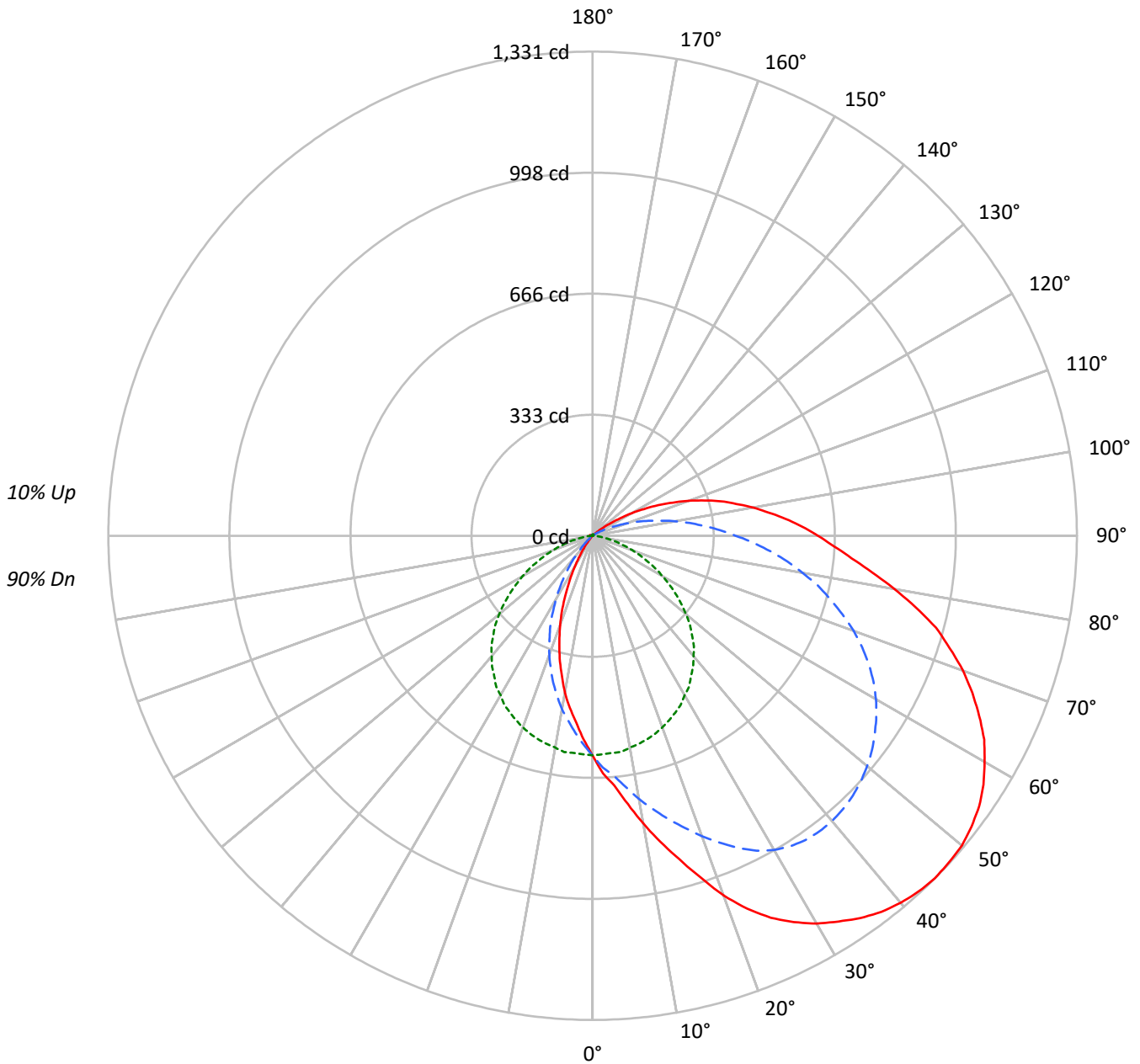
Lumens per Lamp: N/A  
Luminaire Lumens: 2984.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551209

CATALOG NUMBER: FCC-X-2-LD4-2HI-30-UNV-81-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551209

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	90																			
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	67																			
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	53																			
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	43																			
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	36																			
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	30																			
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	26																			
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	23																			
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	20																			
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	18																			
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	16																			

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

	0°	90°	180°
0°	6497	6497	6497
5°	7132	6402	5341
10°	8071	6324	4402
15°	9045	6243	3431
20°	10201	6141	2526
25°	11160	6023	1658
30°	11873	5865	935
35°	12490	5695	412
40°	13037	5486	99
45°	13507	5223	0
50°	13901	4875	0
55°	14201	4432	0
60°	14353	3918	0
65°	14412	3336	0
70°	14364	2720	0
75°	14181	2005	12
80°	13607	1226	61
85°	13152	585	85



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.8	1.9
10°-20°	173.1	5.8
20°-30°	280.3	9.4
30°-40°	360.1	12.1
40°-50°	407.7	13.7
50°-60°	422.3	14.2
60°-70°	398.3	13.3
70°-80°	333.8	11.2
80°-90°	242.0	8.1
90°-100°	159.0	5.3
100°-110°	91.8	3.1
110°-120°	40.5	1.4
120°-130°	11.0	0.4
130°-140°	2.5	0.1
140°-150°	1.6	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	511.3	17.1
0°-40°	871.4	29.2
0°-60°	1701.4	57.0
0°-90°	2675.4	89.7
90°-120°	291.4	9.8
90°-150°	306.5	10.3
90°-180°	309.0	10.4
0°-180°	2984.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	604	604	604	604	604	
5°	689	662	599	544	516	69
15°	920	807	579	418	349	265
25°	1159	947	537	275	172	536
35°	1283	1021	471	134	42	805
45°	1331	1011	386	31	0	1028
55°	1297	947	278	0	0	1158
65°	1173	838	166	0	0	1160
75°	977	676	71	1	1	1025
85°	715	490	12	3	5	611
90°	620	393	3	5	5	340
95°	532	307	2	5	7	417
105°	366	159	2	4	6	386
115°	199	53	2	2	4	199
125°	59	7	3	2	3	59
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°	603.6	603.6	603.6	603.6	603.6	603.6	603.6	603.6	603.6	603.6	603.6
2.5°	654.3	653.6	651.3	647.4	642.0	632.8	625.1	618.2	609.0	601.3	586.7
5°	688.9	685.1	682.0	678.2	665.9	657.4	643.6	628.2	613.6	599.0	569.8
7.5°	744.3	738.2	733.5	722.8	705.9	686.6	665.1	650.5	640.5	599.7	549.8
10°	803.5	798.1	788.9	769.7	748.9	721.2	690.5	655.9	625.1	591.3	532.1
12.5°	861.9	854.3	841.2	816.6	787.4	752.8	710.5	669.7	625.9	585.9	511.3
15°	920.4	911.9	898.1	868.1	829.7	784.3	732.8	681.3	629.7	579.0	489.8
17.5°	984.2	972.7	951.9	918.1	869.6	813.5	752.8	690.5	628.2	570.5	466.7
20°	1052.6	1036.5	1014.2	968.8	911.9	845.8	772.8	699.7	627.4	560.5	440.6
22.5°	1109.5	1093.4	1068.8	1021.9	953.4	872.7	789.7	705.9	624.4	549.0	416.0
25°	1158.7	1145.7	1118.8	1064.9	992.7	901.2	805.8	710.5	619.7	536.7	389.8
27.5°	1197.2	1184.9	1154.9	1099.5	1025.7	926.5	818.1	712.8	613.6	524.4	362.9
30°	1231.0	1218.7	1182.6	1125.7	1048.0	946.5	830.4	713.5	605.9	505.9	333.7
32.5°	1257.2	1245.6	1208.7	1148.0	1063.4	960.4	837.3	712.8	595.9	492.9	302.2
35°	1283.3	1271.8	1228.7	1164.1	1074.9	966.5	842.7	708.9	583.6	471.3	272.2
37.5°	1303.3	1290.2	1246.4	1174.9	1080.3	968.1	842.0	703.5	570.5	453.7	242.2
40°	1317.1	1303.3	1256.4	1181.0	1081.9	965.7	835.8	694.3	555.2	431.4	210.7
42.5°	1326.4	1311.0	1261.0	1190.3	1078.8	959.6	826.6	682.8	538.2	412.1	180.7
45°	1331.0	1314.8	1261.8	1182.6	1073.4	948.1	812.7	668.2	519.8	386.0	150.7
47.5°	1328.7	1311.0	1257.9	1174.1	1063.4	935.8	797.4	650.5	497.5	362.9	122.3
50°	1324.8	1306.4	1249.5	1163.4	1049.6	920.4	780.4	629.0	474.4	334.5	96.9
52.5°	1312.5	1294.1	1240.2	1148.0	1033.4	902.7	757.4	606.7	449.8	306.8	73.8
55°	1297.1	1280.2	1224.1	1134.1	1012.6	881.2	735.8	582.8	426.0	278.3	53.1
57.5°	1273.3	1257.9	1204.1	1111.8	991.9	857.3	712.0	556.7	396.0	249.9	36.9
60°	1244.1	1228.7	1176.4	1086.5	968.1	830.4	685.9	529.8	369.1	221.4	23.1
62.5°	1213.3	1198.7	1144.1	1054.9	938.1	802.0	657.4	502.9	340.6	195.3	13.8
65°	1172.6	1158.7	1109.5	1017.3	905.0	771.2	625.9	470.6	311.4	166.1	7.7
67.5°	1129.5	1117.2	1067.2	982.7	866.6	737.4	593.6	439.0	280.7	140.7	3.8
70°	1083.4	1068.0	1021.9	935.8	827.3	698.9	558.2	406.8	251.4	116.1	0.0
72.5°	1029.6	1018.0	973.4	891.9	782.0	658.2	522.1	371.4	219.1	92.3	0.8
75°	977.3	962.7	921.9	845.0	737.4	615.1	482.1	338.3	187.6	70.7	0.8
77.5°	909.6	905.0	866.6	792.0	695.1	573.6	438.3	298.3	157.6	50.7	0.8
80°	842.0	837.3	807.4	738.9	645.9	524.4	397.5	260.7	128.4	33.8	0.8
82.5°	775.1	768.9	740.5	683.6	595.9	482.9	355.2	223.0	101.5	20.8	0.8
85°	715.1	707.4	676.6	624.4	544.4	436.0	311.4	186.1	75.4	11.5	1.5
87.5°	663.6	658.2	624.4	570.5	492.1	392.1	273.0	150.7	53.1	5.4	2.3
90°	619.7	608.2	578.2	521.3	442.9	343.7	232.2	120.7	35.4	3.1	3.1
92.5°	576.7	566.7	533.6	475.2	399.1	302.2	193.0	92.3	22.3	1.5	3.8
95°	532.1	521.3	489.0	435.2	354.5	259.9	158.4	67.7	12.3	1.5	3.8
97.5°	488.3	478.3	444.4	390.6	314.5	223.0	125.3	47.7	6.2	1.5	3.1
100°	447.5	436.0	405.2	351.4	274.5	186.1	96.9	30.8	3.8	1.5	3.1
102.5°	404.4	395.2	363.7	311.4	233.0	151.5	72.3	19.2	1.5	1.5	2.3
105°	366.0	354.5	323.7	269.9	198.4	119.2	50.7	11.5	1.5	1.5	2.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	238.4	229.1	202.2	156.9	100.7	46.9	13.8	2.3	2.3	2.3	2.3
115°	199.1	185.3	161.5	121.5	74.6	30.8	6.9	2.3	2.3	2.3	2.3
117.5°	159.2	147.6	130.7	92.3	49.2	20.0	3.8	2.3	2.3	2.3	2.3
120°	124.6	113.8	94.6	63.8	33.1	11.5	1.5	2.3	2.3	2.3	2.3
122.5°	89.2	80.7	63.8	41.5	20.0	5.4	2.3	2.3	3.1	3.1	2.3
125°	59.2	54.6	42.3	25.4	12.3	2.3	2.3	2.3	3.1	3.1	2.3
127.5°	38.4	34.6	24.6	14.6	5.4	2.3	2.3	3.1	3.1	3.1	2.3
130°	21.5	19.2	14.6	8.5	2.3	2.3	2.3	3.1	3.1	3.1	2.3
132.5°	12.3	11.5	7.7	1.5	2.3	2.3	2.3	3.1	3.1	3.1	3.1
135°	3.1	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.1
137.5°	0.8	0.8	1.5	1.5	2.3	2.3	3.1	3.8	3.8	3.8	3.1
140°	0.8	0.8	1.5	2.3	2.3	2.3	3.1	3.8	3.8	3.8	3.1
142.5°	0.8	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.1	3.1
145°	0.8	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.1	3.1	3.1
147.5°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.1	3.1
150°	0.8	1.5	1.5	2.3	3.1	3.1	3.1	3.8	3.1	3.1	3.1
152.5°	0.8	1.5	1.5	2.3	3.1	3.1	3.1	3.8	3.1	3.1	3.1
155°	1.5	1.5	1.5	2.3	3.1	3.1	3.1	3.8	3.1	3.1	3.8
157.5°	1.5	1.5	1.5	2.3	3.1	3.1	3.1	3.8	3.1	3.1	3.8
160°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
162.5°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1
165°	1.5	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.1	3.1	3.1
167.5°	1.5	1.5	1.5	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1
170°	1.5	1.5	1.5	2.3	2.3	2.3	3.1	3.8	3.8	3.8	3.8
172.5°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.8	3.8
175°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.8	3.8
177.5°	0.8	1.5	1.5	2.3	2.3	3.1	3.1	3.8	3.8	3.8	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



TEST NUMBER: P551209

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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	603.6	603.6	603.6
2.5°	574.4	563.6	560.5
5°	543.6	525.9	515.9
7.5°	512.9	489.0	477.5
10°	484.4	450.6	438.3
12.5°	450.6	411.4	392.1
15°	418.3	367.5	349.1
17.5°	382.1	325.2	303.7
20°	348.3	283.0	260.7
22.5°	309.9	241.4	216.8
25°	275.3	199.9	172.2
27.5°	236.8	157.6	133.8
30°	200.7	120.7	96.9
32.5°	166.1	88.4	66.9
35°	133.8	60.0	42.3
37.5°	103.0	36.9	21.5
40°	74.6	19.2	10.0
42.5°	50.0	9.2	5.4
45°	30.8	4.6	0.0
47.5°	17.7	0.0	0.0
50°	9.2	0.0	0.0
52.5°	3.8	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°	0.8	0.8	0.8
77.5°	0.8	1.5	2.3
80°	1.5	3.1	3.8
82.5°	3.1	3.8	3.8
85°	3.1	3.8	4.6
87.5°	3.8	4.6	5.4
90°	4.6	5.4	5.4
92.5°	4.6	6.2	6.2
95°	5.4	6.2	6.9
97.5°	6.2	6.9	6.9
100°	5.4	6.9	7.7
102.5°	4.6	6.9	6.9
105°	3.8	5.4	6.2





TEST NUMBER: P551209

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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.1	3.8	3.8
115°	2.3	3.1	3.8
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	1.5
152.5°	2.3	1.5	1.5
155°	2.3	1.5	0.8
157.5°	3.1	1.5	0.8
160°	2.3	1.5	0.8
162.5°	2.3	1.5	0.8
165°	2.3	1.5	0.0
167.5°	2.3	1.5	0.8
170°	2.3	1.5	0.8
172.5°	2.3	1.5	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°	322.9	313.7	283.0	232.2	162.2	90.7	33.8	6.2	1.5	2.3	2.3
110°	281.4	273.7	242.2	193.0	130.7	67.7	22.3	3.8	2.3	2.3	2.3







107.5°	3.1	4.6	5.4
110°	3.1	3.8	4.6



(END OF REPORT)