

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: P551465

Luminaire Tested: **FCC-X-2-LD4-2LO-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: P551465  
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-LD4-2LO-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**

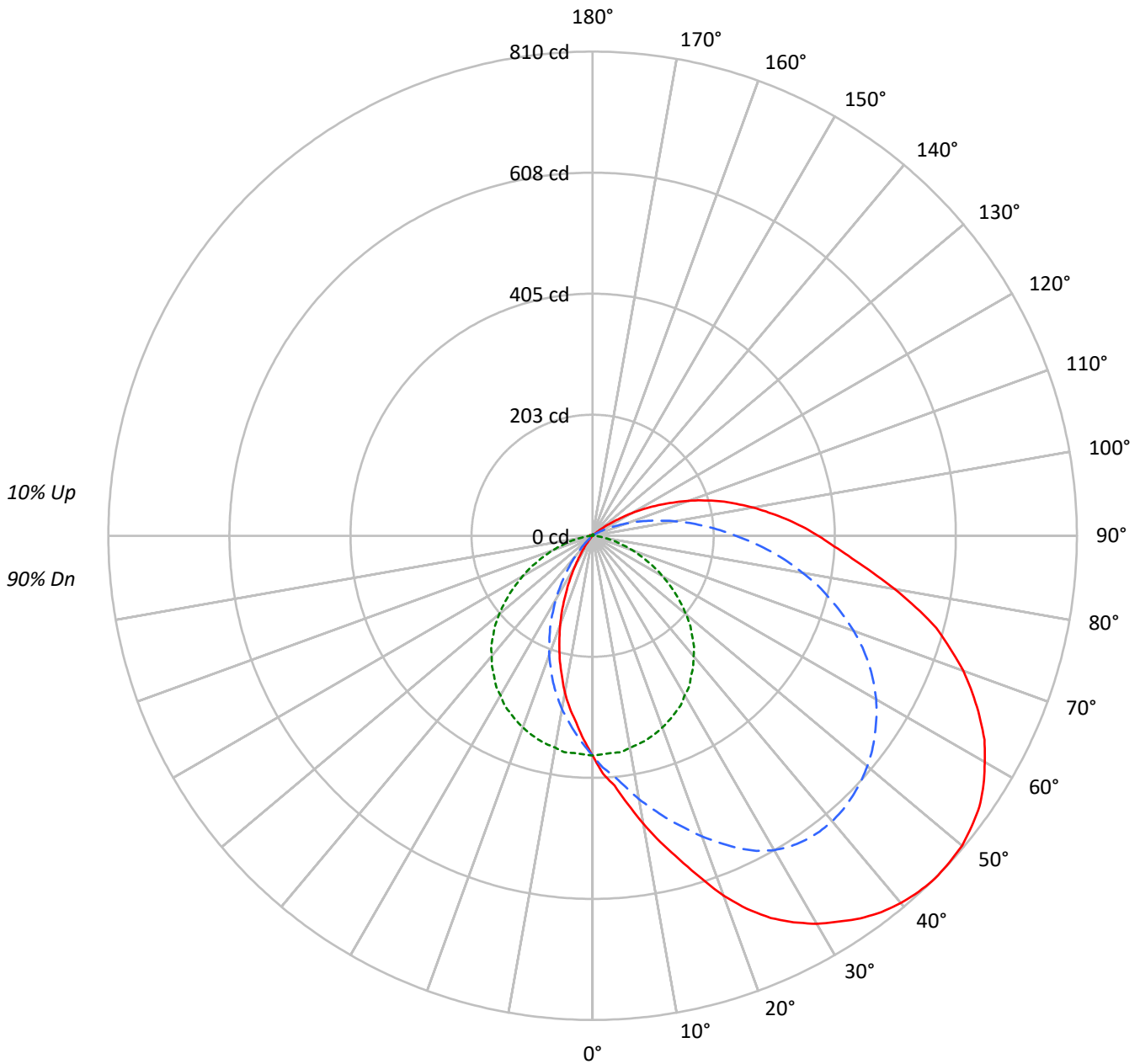
Lumens per Lamp: N/A  
Luminaire Lumens: 1817.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
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: P551465

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

### Luminous Intensity Polar Plot





TEST NUMBER: P551465

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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°	3956	3956	3956
5°	4343	3898	3253
10°	4915	3850	2681
15°	5507	3802	2089
20°	6212	3739	1538
25°	6796	3668	1010
30°	7230	3572	569
35°	7605	3468	251
40°	7939	3341	60
45°	8225	3180	0
50°	8465	2969	0
55°	8648	2699	0
60°	8739	2385	0
65°	8776	2031	0
70°	8746	1656	0
75°	8635	1222	7
80°	8286	747	37
85°	8008	356	51



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.2	1.9
10°-20°	105.4	5.8
20°-30°	170.7	9.4
30°-40°	219.3	12.1
40°-50°	248.2	13.7
50°-60°	257.2	14.2
60°-70°	242.5	13.3
70°-80°	203.3	11.2
80°-90°	147.3	8.1
90°-100°	96.8	5.3
100°-110°	55.9	3.1
110°-120°	24.7	1.4
120°-130°	6.7	0.4
130°-140°	1.5	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	311.3	17.1
0°-40°	530.6	29.2
0°-60°	1036.0	57.0
0°-90°	1629.1	89.7
90°-120°	177.4	9.8
90°-150°	186.6	10.3
90°-180°	188.0	10.3
0°-180°	1817.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	368	368	368	368	368	
5°	420	403	365	331	314	42
15°	560	491	353	255	213	162
25°	706	577	327	168	105	326
35°	781	622	287	82	26	490
45°	810	615	235	19	0	626
55°	790	577	170	0	0	705
65°	714	510	101	0	0	706
75°	595	412	43	0	0	624
85°	435	298	7	2	3	372
90°	377	240	2	3	3	207
95°	324	187	1	3	4	254
105°	223	97	1	2	4	235
115°	121	32	1	1	2	121
125°	36	4	2	1	2	36
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	2	1	0	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5	367.5
2.5°	398.4	398.0	396.6	394.2	390.9	385.3	380.6	376.4	370.8	366.1	357.2
5°	419.5	417.2	415.3	413.0	405.5	400.3	391.9	382.5	373.6	364.7	346.9
7.5°	453.2	449.5	446.7	440.1	429.8	418.1	405.0	396.1	390.0	365.2	334.8
10°	489.3	486.0	480.4	468.7	456.0	439.2	420.4	399.4	380.6	360.0	324.0
12.5°	524.9	520.2	512.2	497.2	479.4	458.4	432.6	407.8	381.1	356.8	311.4
15°	560.4	555.3	546.9	528.6	505.2	477.6	446.2	414.8	383.5	352.6	298.2
17.5°	599.3	592.3	579.6	559.0	529.5	495.4	458.4	420.4	382.5	347.4	284.2
20°	641.0	631.1	617.6	589.9	555.3	515.0	470.5	426.1	382.0	341.3	268.3
22.5°	675.6	665.8	650.8	622.2	580.6	531.4	480.8	429.8	380.2	334.3	253.3
25°	705.6	697.6	681.2	648.5	604.4	548.7	490.7	432.6	377.4	326.8	237.4
27.5°	729.0	721.5	703.2	669.5	624.6	564.2	498.2	434.0	373.6	319.3	221.0
30°	749.6	742.1	720.1	685.4	638.2	576.4	505.7	434.5	368.9	308.1	203.2
32.5°	765.5	758.5	736.0	699.0	647.5	584.8	509.9	434.0	362.9	300.1	184.0
35°	781.4	774.4	748.2	708.9	654.5	588.5	513.1	431.7	355.4	287.0	165.7
37.5°	793.6	785.6	758.9	715.4	657.8	589.5	512.7	428.4	347.4	276.2	147.5
40°	802.0	793.6	765.0	719.2	658.8	588.1	508.9	422.8	338.0	262.7	128.3
42.5°	807.6	798.3	767.8	724.8	656.9	584.3	503.3	415.8	327.7	251.0	110.0
45°	810.5	800.6	768.3	720.1	653.6	577.3	494.9	406.9	316.5	235.0	91.8
47.5°	809.0	798.3	766.0	714.9	647.5	569.8	485.5	396.1	302.9	221.0	74.4
50°	806.7	795.5	760.8	708.4	639.1	560.4	475.2	383.0	288.9	203.7	59.0
52.5°	799.2	788.0	755.2	699.0	629.3	549.7	461.2	369.4	273.9	186.8	44.9
55°	789.9	779.5	745.4	690.6	616.6	536.6	448.1	354.9	259.4	169.5	32.3
57.5°	775.3	766.0	733.2	677.0	604.0	522.0	433.6	339.0	241.1	152.2	22.5
60°	757.5	748.2	716.3	661.6	589.5	505.7	417.6	322.6	224.7	134.8	14.0
62.5°	738.8	729.9	696.7	642.4	571.2	488.3	400.3	306.2	207.4	118.9	8.4
65°	714.0	705.6	675.6	619.4	551.1	469.6	381.1	286.5	189.6	101.1	4.7
67.5°	687.8	680.3	649.9	598.4	527.7	449.0	361.4	267.3	170.9	85.7	2.3
70°	659.7	650.3	622.2	569.8	503.8	425.6	339.9	247.7	153.1	70.7	0.0
72.5°	626.9	619.9	592.7	543.1	476.2	400.8	317.9	226.1	133.4	56.2	0.5
75°	595.1	586.2	561.4	514.5	449.0	374.6	293.6	206.0	114.2	43.1	0.5
77.5°	553.9	551.1	527.7	482.2	423.3	349.3	266.9	181.7	96.0	30.9	0.5
80°	512.7	509.9	491.6	449.9	393.3	319.3	242.1	158.7	78.2	20.6	0.5
82.5°	471.9	468.2	450.9	416.2	362.9	294.0	216.3	135.8	61.8	12.6	0.5
85°	435.4	430.7	412.0	380.2	331.5	265.5	189.6	113.3	45.9	7.0	0.9
87.5°	404.1	400.8	380.2	347.4	299.6	238.8	166.2	91.8	32.3	3.3	1.4
90°	377.4	370.3	352.1	317.4	269.7	209.3	141.4	73.5	21.5	1.9	1.9
92.5°	351.1	345.1	324.9	289.3	243.0	184.0	117.5	56.2	13.6	0.9	2.3
95°	324.0	317.4	297.8	265.0	215.8	158.3	96.4	41.2	7.5	0.9	2.3
97.5°	297.3	291.2	270.6	237.8	191.5	135.8	76.3	29.0	3.7	0.9	1.9
100°	272.5	265.5	246.7	214.0	167.1	113.3	59.0	18.7	2.3	0.9	1.9
102.5°	246.3	240.7	221.5	189.6	141.9	92.2	44.0	11.7	0.9	0.9	1.4
105°	222.9	215.8	197.1	164.3	120.8	72.6	30.9	7.0	0.9	0.9	1.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	145.1	139.5	123.1	95.5	61.3	28.6	8.4	1.4	1.4	1.4	1.4
115°	121.3	112.8	98.3	74.0	45.4	18.7	4.2	1.4	1.4	1.4	1.4
117.5°	96.9	89.9	79.6	56.2	30.0	12.2	2.3	1.4	1.4	1.4	1.4
120°	75.8	69.3	57.6	38.9	20.1	7.0	0.9	1.4	1.4	1.4	1.4
122.5°	54.3	49.2	38.9	25.3	12.2	3.3	1.4	1.4	1.9	1.9	1.4
125°	36.1	33.2	25.8	15.5	7.5	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.4	21.1	15.0	8.9	3.3	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.1	11.7	8.9	5.2	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.5	7.0	4.7	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.9	2.3	2.3	2.3	1.9
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	1.9
142.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
145°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	1.9	1.9	1.9
147.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
150°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
152.5°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
155°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
157.5°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
160°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	0.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	2.3
172.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
175°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
177.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	1.9
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	367.5	367.5	367.5
2.5°	349.7	343.2	341.3
5°	331.0	320.2	314.2
7.5°	312.3	297.8	290.8
10°	295.0	274.4	266.9
12.5°	274.4	250.5	238.8
15°	254.7	223.8	212.6
17.5°	232.7	198.0	184.9
20°	212.1	172.3	158.7
22.5°	188.7	147.0	132.0
25°	167.6	121.7	104.9
27.5°	144.2	96.0	81.5
30°	122.2	73.5	59.0
32.5°	101.1	53.8	40.7
35°	81.5	36.5	25.8
37.5°	62.7	22.5	13.1
40°	45.4	11.7	6.1
42.5°	30.4	5.6	3.3
45°	18.7	2.8	0.0
47.5°	10.8	0.0	0.0
50°	5.6	0.0	0.0
52.5°	2.3	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°	0.5	0.5	0.5
77.5°	0.5	0.9	1.4
80°	0.9	1.9	2.3
82.5°	1.9	2.3	2.3
85°	1.9	2.3	2.8
87.5°	2.3	2.8	3.3
90°	2.8	3.3	3.3
92.5°	2.8	3.7	3.7
95°	3.3	3.7	4.2
97.5°	3.7	4.2	4.2
100°	3.3	4.2	4.7
102.5°	2.8	4.2	4.2
105°	2.3	3.3	3.7





TEST NUMBER: P551465

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

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.3	2.3
115°	1.4	1.9	2.3
117.5°	1.4	1.9	1.9
120°	1.4	1.4	1.9
122.5°	1.4	1.4	1.9
125°	1.4	1.4	1.9
127.5°	1.9	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.9	1.4	1.4
135°	1.9	1.4	1.4
137.5°	1.9	1.4	1.4
140°	1.9	1.4	1.4
142.5°	1.9	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	0.9
152.5°	1.4	0.9	0.9
155°	1.4	0.9	0.5
157.5°	1.9	0.9	0.5
160°	1.4	0.9	0.5
162.5°	1.4	0.9	0.5
165°	1.4	0.9	0.0
167.5°	1.4	0.9	0.5
170°	1.4	0.9	0.5
172.5°	1.4	0.9	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	196.6	191.0	172.3	141.4	98.8	55.2	20.6	3.7	0.9	1.4	1.4
110°	171.4	166.7	147.5	117.5	79.6	41.2	13.6	2.3	1.4	1.4	1.4







107.5°	1.9	2.8	3.3
110°	1.9	2.3	2.8



(END OF REPORT)