

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: P551616

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-82-88-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: P551616  
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-40-UNV-82-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

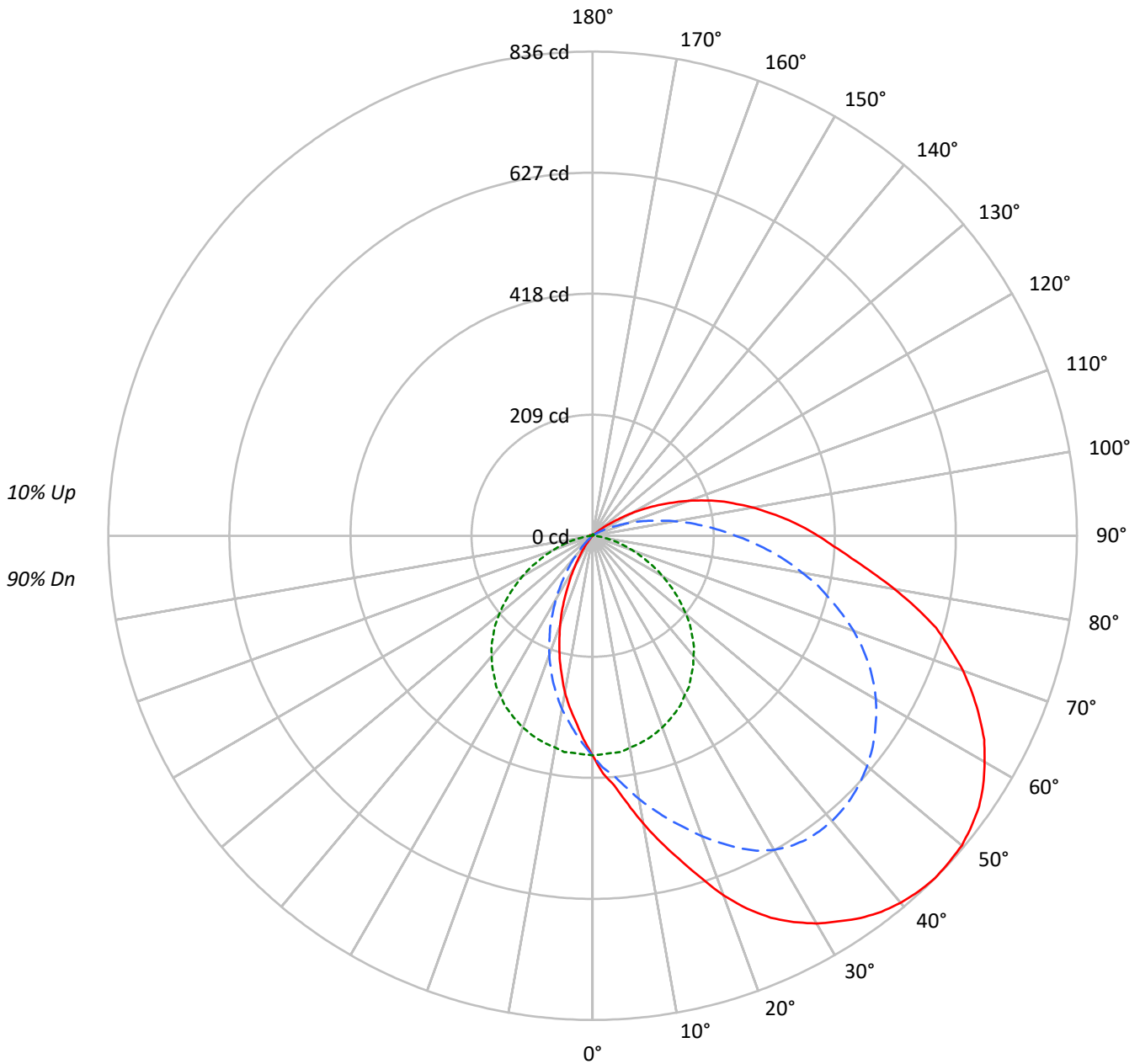
Lumens per Lamp: N/A  
Luminaire Lumens: 1873.9 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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: P551616

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-88-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551616

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

RF	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	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	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	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	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	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	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	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	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	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	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	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	28	22	18	28	22	18	16				

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

	0°	90°	180°
0°	4081	4081	4081
5°	4479	4021	3354
10°	5068	3971	2764
15°	5680	3921	2154
20°	6407	3857	1586
25°	7009	3783	1042
30°	7456	3683	586
35°	7844	3576	259
40°	8188	3445	62
45°	8483	3280	0
50°	8730	3062	0
55°	8919	2783	0
60°	9014	2462	0
65°	9051	2095	0
70°	9021	1708	0
75°	8905	1259	7
80°	8546	769	39
85°	8260	366	53



TEST NUMBER: P551616

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.3	1.9
10°-20°	108.7	5.8
20°-30°	176.1	9.4
30°-40°	226.2	12.1
40°-50°	256.0	13.7
50°-60°	265.2	14.2
60°-70°	250.1	13.3
70°-80°	209.6	11.2
80°-90°	151.9	8.1
90°-100°	99.9	5.3
100°-110°	57.7	3.1
110°-120°	25.4	1.4
120°-130°	6.9	0.4
130°-140°	1.6	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	321.1	17.1
0°-40°	547.2	29.2
0°-60°	1068.5	57.0
0°-90°	1680.2	89.7
90°-120°	183.0	9.8
90°-150°	192.4	10.3
90°-180°	194.0	10.4
0°-180°	1873.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	379	379	379	379	379	
5°	433	416	376	341	324	44
15°	578	507	364	263	219	167
25°	728	595	337	173	108	336
35°	806	641	296	84	27	505
45°	836	635	242	19	0	645
55°	815	595	175	0	0	727
65°	736	526	104	0	0	729
75°	614	425	44	0	0	644
85°	449	308	7	2	3	383
90°	389	247	2	3	3	213
95°	334	193	1	3	4	262
105°	230	100	1	2	4	243
115°	125	33	1	1	2	125
125°	37	5	2	1	2	37
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	



TEST NUMBER: P551616

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-88-ED1D

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1	379.1
2.5°	410.9	410.5	409.0	406.6	403.2	397.4	392.6	388.2	382.4	377.6	368.4
5°	432.7	430.3	428.3	425.9	418.2	412.9	404.2	394.5	385.3	376.2	357.8
7.5°	467.4	463.6	460.7	453.9	443.3	431.2	417.7	408.5	402.2	376.7	345.3
10°	504.6	501.2	495.4	483.4	470.3	452.9	433.6	411.9	392.6	371.3	334.2
12.5°	541.3	536.5	528.3	512.8	494.5	472.7	446.2	420.6	393.1	368.0	321.1
15°	578.0	572.7	564.0	545.2	521.0	492.5	460.2	427.8	395.5	363.6	307.6
17.5°	618.1	610.9	597.8	576.6	546.1	510.9	472.7	433.6	394.5	358.3	293.1
20°	661.1	650.9	636.9	608.4	572.7	531.2	485.3	439.4	394.0	352.0	276.7
22.5°	696.8	686.7	671.2	641.8	598.8	548.1	495.9	443.3	392.1	344.8	261.2
25°	727.7	719.5	702.6	668.8	623.4	565.9	506.1	446.2	389.2	337.1	244.8
27.5°	751.9	744.1	725.3	690.5	644.2	581.9	513.8	447.6	385.3	329.3	227.9
30°	773.1	765.4	742.7	706.9	658.2	594.4	521.5	448.1	380.5	317.7	209.6
32.5°	789.5	782.3	759.1	720.9	667.8	603.1	525.9	447.6	374.2	309.5	189.8
35°	805.9	798.7	771.7	731.1	675.1	607.0	529.2	445.2	366.5	296.0	170.9
37.5°	818.5	810.3	782.8	737.8	678.5	608.0	528.8	441.8	358.3	284.9	152.1
40°	827.2	818.5	789.0	741.7	679.4	606.5	524.9	436.0	348.6	270.9	132.3
42.5°	833.0	823.3	791.9	747.5	677.5	602.6	519.1	428.8	338.0	258.8	113.5
45°	835.9	825.7	792.4	742.7	674.1	595.4	510.4	419.6	326.4	242.4	94.6
47.5°	834.4	823.3	790.0	737.4	667.8	587.7	500.8	408.5	312.4	227.9	76.8
50°	832.0	820.4	784.7	730.6	659.1	578.0	490.1	395.0	297.9	210.1	60.8
52.5°	824.3	812.7	778.9	720.9	649.0	566.9	475.6	381.0	282.5	192.7	46.4
55°	814.6	804.0	768.8	712.3	636.0	553.4	462.1	366.0	267.5	174.8	33.3
57.5°	799.7	790.0	756.2	698.3	622.9	538.4	447.2	349.6	248.7	156.9	23.2
60°	781.3	771.7	738.8	682.3	608.0	521.5	430.7	332.7	231.8	139.1	14.5
62.5°	762.0	752.8	718.5	662.5	589.1	503.6	412.9	315.8	213.9	122.7	8.7
65°	736.4	727.7	696.8	638.9	568.4	484.3	393.1	295.5	195.6	104.3	4.8
67.5°	709.4	701.6	670.2	617.1	544.2	463.1	372.8	275.7	176.3	88.4	2.4
70°	680.4	670.7	641.8	587.7	519.6	438.9	350.6	255.4	157.9	72.9	0.0
72.5°	646.6	639.3	611.3	560.1	491.1	413.4	327.9	233.2	137.6	57.9	0.5
75°	613.7	604.6	579.0	530.7	463.1	386.3	302.8	212.5	117.8	44.4	0.5
77.5°	571.3	568.4	544.2	497.4	436.5	360.2	275.2	187.4	99.0	31.9	0.5
80°	528.8	525.9	507.0	464.1	405.6	329.3	249.7	163.7	80.6	21.2	0.5
82.5°	486.7	482.9	465.0	429.3	374.2	303.3	223.1	140.0	63.7	13.0	0.5
85°	449.1	444.3	424.9	392.1	341.9	273.8	195.6	116.9	47.3	7.2	1.0
87.5°	416.7	413.4	392.1	358.3	309.0	246.3	171.4	94.6	33.3	3.4	1.4
90°	389.2	382.0	363.1	327.4	278.1	215.8	145.8	75.8	22.2	1.9	1.9
92.5°	362.2	355.9	335.1	298.4	250.6	189.8	121.2	57.9	14.0	1.0	2.4
95°	334.2	327.4	307.1	273.3	222.6	163.2	99.5	42.5	7.7	1.0	2.4
97.5°	306.6	300.4	279.1	245.3	197.5	140.0	78.7	29.9	3.9	1.0	1.9
100°	281.0	273.8	254.5	220.7	172.4	116.9	60.8	19.3	2.4	1.0	1.9
102.5°	254.0	248.2	228.4	195.6	146.3	95.1	45.4	12.1	1.0	1.0	1.4
105°	229.9	222.6	203.3	169.5	124.6	74.8	31.9	7.2	1.0	1.0	1.4



TEST NUMBER: P551616

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-88-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	149.7	143.9	127.0	98.5	63.3	29.5	8.7	1.4	1.4	1.4	1.4
115°	125.1	116.4	101.4	76.3	46.8	19.3	4.3	1.4	1.4	1.4	1.4
117.5°	100.0	92.7	82.1	57.9	30.9	12.6	2.4	1.4	1.4	1.4	1.4
120°	78.2	71.5	59.4	40.1	20.8	7.2	1.0	1.4	1.4	1.4	1.4
122.5°	56.0	50.7	40.1	26.1	12.6	3.4	1.4	1.4	1.9	1.9	1.4
125°	37.2	34.3	26.6	15.9	7.7	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	24.1	21.7	15.5	9.2	3.4	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.5	12.1	9.2	5.3	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.7	7.2	4.8	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9
137.5°	0.5	0.5	1.0	1.0	1.4	1.4	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
160°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	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°	379.1	379.1	379.1
2.5°	360.7	354.0	352.0
5°	341.4	330.3	324.0
7.5°	322.1	307.1	299.9
10°	304.2	283.0	275.2
12.5°	283.0	258.3	246.3
15°	262.7	230.8	219.2
17.5°	240.0	204.3	190.7
20°	218.7	177.7	163.7
22.5°	194.6	151.6	136.2
25°	172.9	125.6	108.2
27.5°	148.7	99.0	84.0
30°	126.0	75.8	60.8
32.5°	104.3	55.5	42.0
35°	84.0	37.7	26.6
37.5°	64.7	23.2	13.5
40°	46.8	12.1	6.3
42.5°	31.4	5.8	3.4
45°	19.3	2.9	0.0
47.5°	11.1	0.0	0.0
50°	5.8	0.0	0.0
52.5°	2.4	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	1.0	1.4
80°	1.0	1.9	2.4
82.5°	1.9	2.4	2.4
85°	1.9	2.4	2.9
87.5°	2.4	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.9	3.9
95°	3.4	3.9	4.3
97.5°	3.9	4.3	4.3
100°	3.4	4.3	4.8
102.5°	2.9	4.3	4.3
105°	2.4	3.4	3.9





TEST NUMBER: P551616

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-88-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.4	1.9	2.4
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	1.0
152.5°	1.4	1.0	1.0
155°	1.4	1.0	0.5
157.5°	1.9	1.0	0.5
160°	1.4	1.0	0.5
162.5°	1.4	1.0	0.5
165°	1.4	1.0	0.0
167.5°	1.4	1.0	0.5
170°	1.4	1.0	0.5
172.5°	1.4	1.0	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°	202.8	197.0	177.7	145.8	101.9	57.0	21.2	3.9	1.0	1.4	1.4
110°	176.7	171.9	152.1	121.2	82.1	42.5	14.0	2.4	1.4	1.4	1.4







107.5°	1.9	2.9	3.4
110°	1.9	2.4	2.9



(END OF REPORT)