

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: P550604

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-93-86-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: P550604
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-LD4-1HI-40-UNV-93-86-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

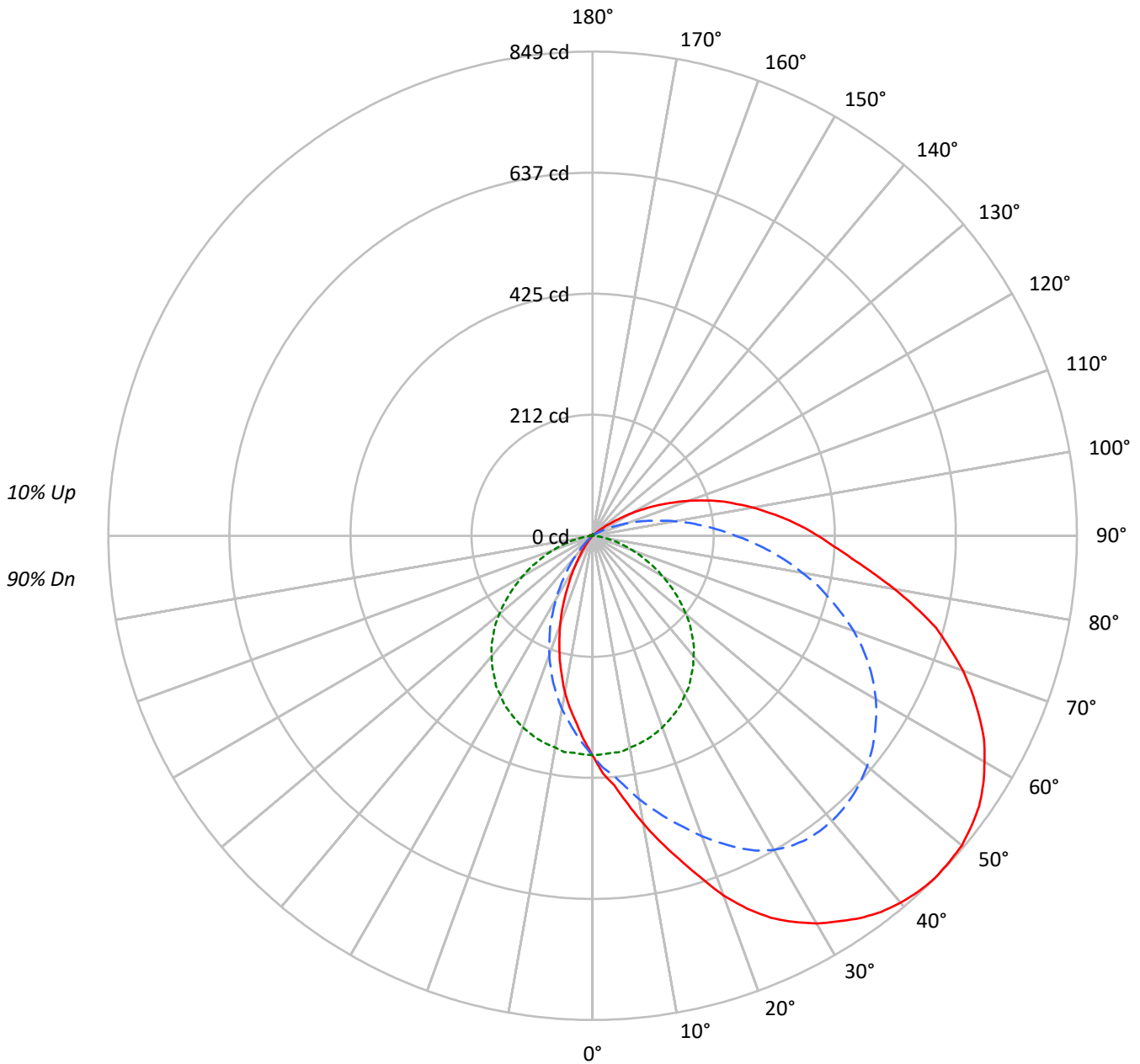
Lumens per Lamp: N/A
Luminaire Lumens: 1903.1 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
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

TEST NUMBER: P550604

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-86-ED1D

Luminous Intensity Polar Plot





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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°	4143	4143	4143
5°	4549	4083	3406
10°	5147	4033	2807
15°	5768	3981	2188
20°	6506	3917	1611
25°	7117	3841	1057
30°	7572	3741	596
35°	7965	3632	263
40°	8315	3499	63
45°	8614	3331	0
50°	8866	3109	0
55°	9056	2826	0
60°	9153	2499	0
65°	9191	2127	0
70°	9160	1734	0
75°	9043	1279	7
80°	8677	783	40
85°	8387	376	53



TEST NUMBER: P550604

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-86-ED1D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	1.9
10°-20°	110.4	5.8
20°-30°	178.8	9.4
30°-40°	229.7	12.1
40°-50°	260.0	13.7
50°-60°	269.3	14.2
60°-70°	254.0	13.3
70°-80°	212.9	11.2
80°-90°	154.3	8.1
90°-100°	101.4	5.3
100°-110°	58.6	3.1
110°-120°	25.9	1.4
120°-130°	7.0	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	326.1	17.1
0°-40°	555.7	29.2
0°-60°	1085.0	57.0
0°-90°	1706.2	89.7
90°-120°	185.9	9.8
90°-150°	195.6	10.3
90°-180°	197.0	10.4
0°-180°	1903.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	385	385	385	385	385	
5°	439	422	382	347	329	44
15°	587	515	369	267	223	169
25°	739	604	342	176	110	342
35°	818	651	301	85	27	513
45°	849	645	246	20	0	655
55°	827	604	178	0	0	739
65°	748	534	106	0	0	740
75°	623	431	45	0	0	654
85°	456	313	7	2	3	389
90°	395	251	2	3	3	217
95°	339	196	1	3	4	266
105°	233	101	1	2	4	246
115°	127	34	2	2	2	127
125°	38	5	2	2	2	38
135°	2	2	2	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	2	2	0	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°	384.9	384.9	384.9	384.9	384.9	384.9	384.9	384.9	384.9	384.9	384.9
2.5°	417.3	416.8	415.3	412.9	409.4	403.6	398.7	394.2	388.4	383.5	374.1
5°	439.4	436.9	434.9	432.5	424.7	419.3	410.4	400.6	391.3	382.0	363.4
7.5°	474.7	470.7	467.8	460.9	450.1	437.9	424.2	414.8	408.5	382.5	350.6
10°	512.4	509.0	503.1	490.8	477.6	460.0	440.3	418.3	398.7	377.1	339.3
12.5°	549.7	544.8	536.5	520.8	502.1	480.1	453.1	427.1	399.2	373.7	326.1
15°	587.0	581.6	572.7	553.6	529.1	500.2	467.3	434.5	401.6	369.2	312.4
17.5°	627.7	620.3	607.1	585.5	554.6	518.8	480.1	440.3	400.6	363.8	297.6
20°	671.3	661.0	646.8	617.9	581.6	539.4	492.8	446.2	400.1	357.5	281.0
22.5°	707.6	697.3	681.6	651.7	608.0	556.6	503.6	450.1	398.2	350.1	265.3
25°	739.0	730.6	713.5	679.1	633.1	574.7	513.9	453.1	395.2	342.3	248.6
27.5°	763.5	755.6	736.5	701.2	654.1	590.9	521.7	454.6	391.3	334.4	231.4
30°	785.1	777.2	754.2	717.9	668.4	603.6	529.6	455.1	386.4	322.7	212.8
32.5°	801.7	794.4	770.8	732.1	678.2	612.5	534.0	454.6	380.0	314.3	192.7
35°	818.4	811.1	783.6	742.4	685.5	616.4	537.4	452.1	372.2	300.6	173.6
37.5°	831.2	822.8	794.9	749.3	689.0	617.4	536.9	448.7	363.8	289.3	154.5
40°	840.0	831.2	801.2	753.2	689.9	615.9	533.0	442.8	354.0	275.1	134.4
42.5°	845.9	836.1	804.2	759.1	688.0	612.0	527.1	435.4	343.3	262.8	115.2
45°	848.8	838.5	804.7	754.2	684.5	604.6	518.3	426.1	331.5	246.2	96.1
47.5°	847.3	836.1	802.2	748.8	678.2	596.8	508.5	414.8	317.3	231.4	78.0
50°	844.9	833.1	796.8	741.9	669.3	587.0	497.7	401.1	302.6	213.3	61.8
52.5°	837.0	825.3	790.9	732.1	659.0	575.7	483.0	386.9	286.9	195.7	47.1
55°	827.2	816.4	780.7	723.3	645.8	562.0	469.3	371.7	271.7	177.5	33.8
57.5°	812.0	802.2	767.9	709.1	632.6	546.7	454.1	355.0	252.5	159.4	23.5
60°	793.4	783.6	750.2	692.9	617.4	529.6	437.4	337.9	235.4	141.2	14.7
62.5°	773.8	764.5	729.7	672.8	598.2	511.4	419.3	320.7	217.2	124.6	8.8
65°	747.8	739.0	707.6	648.7	577.2	491.8	399.2	300.1	198.6	105.9	4.9
67.5°	720.3	712.5	680.6	626.7	552.6	470.3	378.6	280.0	179.0	89.7	2.5
70°	690.9	681.1	651.7	596.8	527.6	445.7	356.0	259.4	160.3	74.0	0.0
72.5°	656.6	649.2	620.8	568.8	498.7	419.7	333.0	236.8	139.8	58.8	0.5
75°	623.2	613.9	587.9	538.9	470.3	392.3	307.5	215.8	119.6	45.1	0.5
77.5°	580.1	577.2	552.6	505.1	443.3	365.8	279.5	190.3	100.5	32.4	0.5
80°	536.9	534.0	514.9	471.2	411.9	334.4	253.5	166.2	81.9	21.6	0.5
82.5°	494.3	490.4	472.2	435.9	380.0	307.9	226.5	142.2	64.7	13.2	0.5
85°	456.0	451.1	431.5	398.2	347.2	278.0	198.6	118.7	48.1	7.4	1.0
87.5°	423.2	419.7	398.2	363.8	313.8	250.1	174.1	96.1	33.8	3.4	1.5
90°	395.2	387.9	368.7	332.5	282.4	219.2	148.1	77.0	22.6	2.0	2.0
92.5°	367.8	361.4	340.3	303.0	254.5	192.7	123.1	58.8	14.2	1.0	2.5
95°	339.3	332.5	311.9	277.5	226.1	165.7	101.0	43.2	7.8	1.0	2.5
97.5°	311.4	305.0	283.4	249.1	200.6	142.2	79.9	30.4	3.9	1.0	2.0
100°	285.4	278.0	258.4	224.1	175.1	118.7	61.8	19.6	2.5	1.0	2.0
102.5°	257.9	252.0	231.9	198.6	148.6	96.6	46.1	12.3	1.0	1.0	1.5
105°	233.4	226.1	206.4	172.1	126.5	76.0	32.4	7.4	1.0	1.0	1.5



TEST NUMBER: P550604

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-86-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	152.0	146.1	129.0	100.0	64.2	29.9	8.8	1.5	1.5	1.5	1.5
115°	127.0	118.2	103.0	77.5	47.6	19.6	4.4	1.5	1.5	1.5	1.5
117.5°	101.5	94.1	83.4	58.8	31.4	12.7	2.5	1.5	1.5	1.5	1.5
120°	79.4	72.6	60.3	40.7	21.1	7.4	1.0	1.5	1.5	1.5	1.5
122.5°	56.9	51.5	40.7	26.5	12.7	3.4	1.5	1.5	2.0	2.0	1.5
125°	37.8	34.8	27.0	16.2	7.8	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.5	22.1	15.7	9.3	3.4	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.7	12.3	9.3	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.8	7.4	4.9	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



TEST NUMBER: P550604

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-86-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	384.9	384.9	384.9
2.5°	366.3	359.4	357.5
5°	346.7	335.4	329.0
7.5°	327.1	311.9	304.5
10°	308.9	287.3	279.5
12.5°	287.3	262.3	250.1
15°	266.8	234.4	222.6
17.5°	243.7	207.4	193.7
20°	222.1	180.5	166.2
22.5°	197.6	154.0	138.3
25°	175.5	127.5	109.8
27.5°	151.0	100.5	85.3
30°	128.0	77.0	61.8
32.5°	105.9	56.4	42.7
35°	85.3	38.2	27.0
37.5°	65.7	23.5	13.7
40°	47.6	12.3	6.4
42.5°	31.9	5.9	3.4
45°	19.6	2.9	0.0
47.5°	11.3	0.0	0.0
50°	5.9	0.0	0.0
52.5°	2.5	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	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	2.9
87.5°	2.5	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.9	3.9
95°	3.4	3.9	4.4
97.5°	3.9	4.4	4.4
100°	3.4	4.4	4.9
102.5°	2.9	4.4	4.4
105°	2.5	3.4	3.9



TEST NUMBER: P550604

CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-86-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	206.0	200.1	180.5	148.1	103.5	57.9	21.6	3.9	1.0	1.5	1.5
110°	179.5	174.6	154.5	123.1	83.4	43.2	14.2	2.5	1.5	1.5	1.5





107.5°	2.0	2.9	3.4
110°	2.0	2.5	2.9



(END OF REPORT)