

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: P551505

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-93-94-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: P551505
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-93-94-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K,
AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

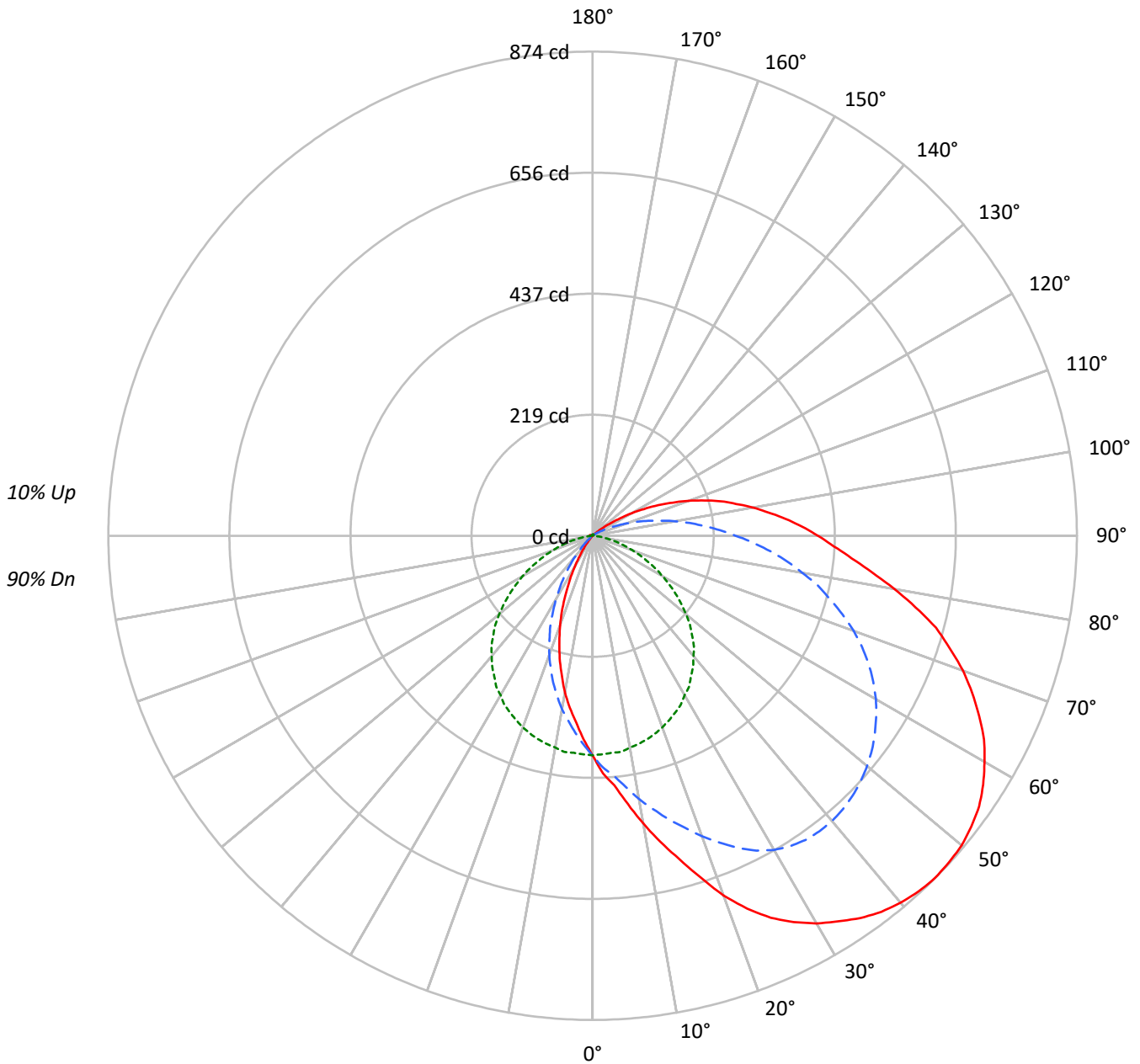
Lumens per Lamp: N/A
Luminaire Lumens: 1958.9 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{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

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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°	4266	4266	4266
5°	4682	4203	3506
10°	5298	4152	2890
15°	5938	4098	2252
20°	6698	4032	1658
25°	7326	3954	1089
30°	7795	3851	613
35°	8200	3738	271
40°	8559	3602	65
45°	8868	3429	0
50°	9126	3201	0
55°	9324	2909	0
60°	9422	2573	0
65°	9461	2189	0
70°	9429	1785	0
75°	9310	1316	7
80°	8932	805	40
85°	8635	386	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.0	1.9
10°-20°	113.7	5.8
20°-30°	184.0	9.4
30°-40°	236.4	12.1
40°-50°	267.6	13.7
50°-60°	277.3	14.2
60°-70°	261.5	13.3
70°-80°	219.1	11.2
80°-90°	158.8	8.1
90°-100°	104.4	5.3
100°-110°	60.3	3.1
110°-120°	26.6	1.4
120°-130°	7.2	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°	335.7	17.1
0°-40°	572.1	29.2
0°-60°	1117.0	57.0
0°-90°	1756.4	89.7
90°-120°	191.3	9.8
90°-150°	201.2	10.3
90°-180°	202.0	10.3
0°-180°	1958.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	396	396	396	396	396	
5°	452	434	393	357	339	46
15°	604	530	380	275	229	174
25°	761	622	352	181	113	352
35°	842	670	309	88	28	528
45°	874	664	253	20	0	675
55°	852	622	183	0	0	760
65°	770	550	109	0	0	762
75°	642	444	46	0	0	673
85°	470	322	8	2	3	401
90°	407	258	2	3	4	223
95°	349	202	1	4	4	274
105°	240	104	1	2	4	254
115°	131	35	2	2	2	131
125°	39	5	2	2	2	39
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°	396.3	396.3	396.3	396.3	396.3	396.3	396.3	396.3	396.3	396.3	396.3
2.5°	429.6	429.1	427.6	425.0	421.5	415.4	410.4	405.8	399.8	394.7	385.2
5°	452.3	449.8	447.7	445.2	437.1	431.6	422.5	412.4	402.8	393.2	374.0
7.5°	488.6	484.6	481.6	474.5	463.4	450.8	436.6	427.1	420.5	393.7	360.9
10°	527.5	524.0	517.9	505.3	491.7	473.5	453.3	430.6	410.4	388.2	349.3
12.5°	565.9	560.8	552.2	536.1	516.9	494.2	466.4	439.7	410.9	384.6	335.7
15°	604.2	598.7	589.6	569.9	544.7	514.9	481.1	447.2	413.4	380.1	321.6
17.5°	646.1	638.6	624.9	602.7	570.9	534.1	494.2	453.3	412.4	374.6	306.4
20°	691.1	680.5	665.8	636.0	598.7	555.3	507.3	459.4	411.9	368.0	289.2
22.5°	728.4	717.8	701.7	670.9	625.9	572.9	518.4	463.4	409.9	360.4	273.1
25°	760.7	752.1	734.5	699.1	651.7	591.6	529.0	466.4	406.9	352.3	255.9
27.5°	786.0	777.9	758.2	721.8	673.4	608.3	537.1	467.9	402.8	344.3	238.3
30°	808.2	800.1	776.4	739.0	688.0	621.4	545.2	468.4	397.8	332.2	219.1
32.5°	825.3	817.8	793.5	753.6	698.1	630.5	549.7	467.9	391.2	323.6	198.4
35°	842.5	834.9	806.7	764.2	705.7	634.5	553.2	465.4	383.1	309.4	178.7
37.5°	855.6	847.0	818.3	771.3	709.2	635.5	552.7	461.9	374.6	297.8	159.0
40°	864.7	855.6	824.8	775.4	710.2	634.0	548.7	455.8	364.5	283.2	138.3
42.5°	870.8	860.7	827.9	781.4	708.2	630.0	542.6	448.3	353.4	270.6	118.6
45°	873.8	863.2	828.4	776.4	704.7	622.4	533.6	438.7	341.2	253.4	98.9
47.5°	872.3	860.7	825.8	770.8	698.1	614.3	523.5	427.1	326.6	238.3	80.3
50°	869.7	857.6	820.3	763.7	689.0	604.2	512.4	412.9	311.5	219.6	63.6
52.5°	861.7	849.6	814.2	753.6	678.4	592.6	497.2	398.3	295.3	201.4	48.5
55°	851.6	840.5	803.6	744.6	664.8	578.5	483.1	382.6	279.7	182.7	34.8
57.5°	835.9	825.8	790.5	729.9	651.2	562.8	467.4	365.5	260.0	164.1	24.2
60°	816.7	806.7	772.3	713.3	635.5	545.2	450.3	347.8	242.3	145.4	15.1
62.5°	796.6	787.0	751.1	692.6	615.8	526.5	431.6	330.1	223.6	128.2	9.1
65°	769.8	760.7	728.4	667.8	594.1	506.3	410.9	308.9	204.4	109.0	5.0
67.5°	741.5	733.5	700.6	645.1	568.9	484.1	389.7	288.2	184.2	92.4	2.5
70°	711.2	701.2	670.9	614.3	543.2	458.9	366.5	267.0	165.1	76.2	0.0
72.5°	675.9	668.3	639.1	585.6	513.4	432.1	342.8	243.8	143.9	60.6	0.5
75°	641.6	632.0	605.2	554.8	484.1	403.8	316.5	222.1	123.2	46.4	0.5
77.5°	597.2	594.1	568.9	519.9	456.3	376.6	287.7	195.9	103.5	33.3	0.5
80°	552.7	549.7	530.0	485.1	424.0	344.3	261.0	171.1	84.3	22.2	0.5
82.5°	508.8	504.8	486.1	448.8	391.2	317.0	233.2	146.4	66.6	13.6	0.5
85°	469.5	464.4	444.2	409.9	357.4	286.2	204.4	122.2	49.5	7.6	1.0
87.5°	435.6	432.1	409.9	374.6	323.1	257.4	179.2	98.9	34.8	3.5	1.5
90°	406.9	399.3	379.6	342.2	290.8	225.6	152.4	79.3	23.2	2.0	2.0
92.5°	378.6	372.0	350.3	312.0	262.0	198.4	126.7	60.6	14.6	1.0	2.5
95°	349.3	342.2	321.0	285.7	232.7	170.6	104.0	44.4	8.1	1.0	2.5
97.5°	320.5	314.0	291.8	256.4	206.5	146.4	82.3	31.3	4.0	1.0	2.0
100°	293.8	286.2	266.0	230.7	180.2	122.2	63.6	20.2	2.5	1.0	2.0
102.5°	265.5	259.5	238.8	204.4	153.0	99.4	47.5	12.6	1.0	1.0	1.5
105°	240.3	232.7	212.5	177.2	130.2	78.2	33.3	7.6	1.0	1.0	1.5



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CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-94-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	156.5	150.4	132.8	103.0	66.1	30.8	9.1	1.5	1.5	1.5	1.5
115°	130.7	121.7	106.0	79.8	49.0	20.2	4.5	1.5	1.5	1.5	1.5
117.5°	104.5	96.9	85.8	60.6	32.3	13.1	2.5	1.5	1.5	1.5	1.5
120°	81.8	74.7	62.1	41.9	21.7	7.6	1.0	1.5	1.5	1.5	1.5
122.5°	58.6	53.0	41.9	27.3	13.1	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.9	35.8	27.8	16.7	8.1	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.2	22.7	16.2	9.6	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.1	12.6	9.6	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.1	7.6	5.0	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



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	396.3	396.3	396.3
2.5°	377.1	370.0	368.0
5°	356.9	345.3	338.7
7.5°	336.7	321.0	313.5
10°	318.0	295.8	287.7
12.5°	295.8	270.1	257.4
15°	274.6	241.3	229.2
17.5°	250.9	213.5	199.4
20°	228.7	185.8	171.1
22.5°	203.4	158.5	142.4
25°	180.7	131.2	113.1
27.5°	155.5	103.5	87.8
30°	131.7	79.3	63.6
32.5°	109.0	58.1	43.9
35°	87.8	39.4	27.8
37.5°	67.6	24.2	14.1
40°	49.0	12.6	6.6
42.5°	32.8	6.1	3.5
45°	20.2	3.0	0.0
47.5°	11.6	0.0	0.0
50°	6.1	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	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.0	4.0
95°	3.5	4.0	4.5
97.5°	4.0	4.5	4.5
100°	3.5	4.5	5.0
102.5°	3.0	4.5	4.5
105°	2.5	3.5	4.0



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CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-94-ED1D-90

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°	212.0	206.0	185.8	152.4	106.5	59.6	22.2	4.0	1.0	1.5	1.5
110°	184.8	179.7	159.0	126.7	85.8	44.4	14.6	2.5	1.5	1.5	1.5





107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)