

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: P550734

Luminaire Tested: **FCC-X-2-LD4-1LO-30-UNV-93-87-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: P550734
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-LD4-1LO-30-UNV-93-87-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

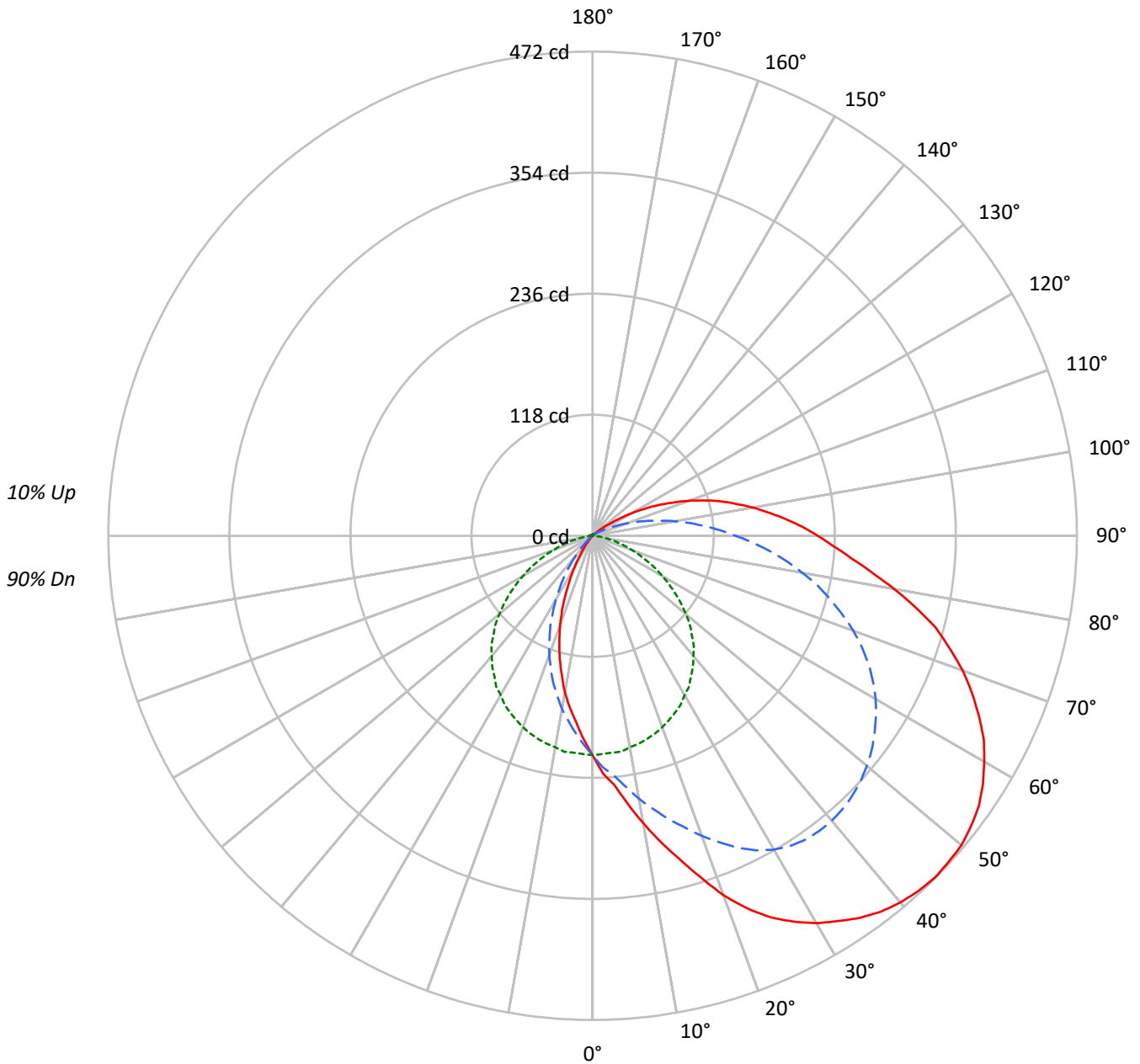
Lumens per Lamp: N/A
Luminaire Lumens: 1057.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 11.7
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

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Luminous Intensity Polar Plot





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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	0
RCR																					
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	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	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	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	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	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	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	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	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	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	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2301	2301	2301
5°	2526	2268	1892
10°	2859	2239	1559
15°	3204	2211	1216
20°	3614	2176	894
25°	3954	2133	587
30°	4206	2077	331
35°	4425	2018	146
40°	4619	1943	35
45°	4785	1850	0
50°	4924	1727	0
55°	5031	1570	0
60°	5084	1387	0
65°	5106	1181	0
70°	5089	963	0
75°	5024	712	4
80°	4819	435	23
85°	4659	208	29



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.5	1.9
10°-20°	61.3	5.8
20°-30°	99.3	9.4
30°-40°	127.6	12.1
40°-50°	144.4	13.7
50°-60°	149.6	14.2
60°-70°	141.1	13.3
70°-80°	118.2	11.2
80°-90°	85.7	8.1
90°-100°	56.3	5.3
100°-110°	32.5	3.1
110°-120°	14.4	1.4
120°-130°	3.9	0.4
130°-140°	0.9	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	181.1	17.1
0°-40°	308.7	29.2
0°-60°	602.7	57.0
0°-90°	947.7	89.7
90°-120°	103.2	9.8
90°-150°	108.6	10.3
90°-180°	109.0	10.3
0°-180°	1057.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	214	214	214	214	214	
5°	244	234	212	193	183	25
15°	326	286	205	148	124	94
25°	410	335	190	98	61	190
35°	455	362	167	47	15	285
45°	472	358	137	11	0	364
55°	460	335	99	0	0	410
65°	415	297	59	0	0	411
75°	346	240	25	0	0	363
85°	253	174	4	1	2	216
90°	220	139	1	2	2	120
95°	188	109	0	2	2	148
105°	130	56	0	1	2	137
115°	70	19	1	1	1	71
125°	21	3	1	1	1	21
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	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°	213.8	213.8	213.8	213.8	213.8	213.8	213.8	213.8	213.8	213.8	213.8
2.5°	231.8	231.5	230.7	229.3	227.4	224.2	221.4	219.0	215.7	213.0	207.8
5°	244.0	242.7	241.6	240.2	235.9	232.9	228.0	222.5	217.3	212.2	201.8
7.5°	263.6	261.5	259.8	256.0	250.0	243.2	235.6	230.4	226.9	212.4	194.7
10°	284.6	282.7	279.4	272.6	265.3	255.5	244.6	232.3	221.4	209.4	188.5
12.5°	305.3	302.6	298.0	289.3	278.9	266.6	251.7	237.2	221.7	207.5	181.1
15°	326.0	323.0	318.1	307.5	293.9	277.8	259.6	241.3	223.1	205.1	173.5
17.5°	348.6	344.5	337.2	325.2	308.0	288.2	266.6	244.6	222.5	202.1	165.3
20°	372.9	367.1	359.2	343.2	323.0	299.6	273.7	247.9	222.2	198.6	156.1
22.5°	393.0	387.3	378.6	362.0	337.7	309.1	279.7	250.0	221.2	194.5	147.3
25°	410.5	405.8	396.3	377.2	351.6	319.2	285.4	251.7	219.5	190.1	138.1
27.5°	424.1	419.7	409.1	389.5	363.3	328.2	289.8	252.5	217.3	185.8	128.6
30°	436.1	431.7	418.9	398.7	371.2	335.3	294.2	252.8	214.6	179.2	118.2
32.5°	445.3	441.2	428.2	406.6	376.7	340.2	296.6	252.5	211.1	174.6	107.0
35°	454.6	450.5	435.2	412.4	380.8	342.4	298.5	251.1	206.7	167.0	96.4
37.5°	461.7	457.0	441.5	416.2	382.7	342.9	298.2	249.2	202.1	160.7	85.8
40°	466.6	461.7	445.0	418.4	383.2	342.1	296.1	245.9	196.6	152.8	74.6
42.5°	469.8	464.4	446.7	421.6	382.1	339.9	292.8	241.9	190.7	146.0	64.0
45°	471.5	465.7	446.9	418.9	380.2	335.8	287.9	236.7	184.1	136.7	53.4
47.5°	470.6	464.4	445.6	415.9	376.7	331.5	282.4	230.4	176.2	128.6	43.3
50°	469.3	462.7	442.6	412.1	371.8	326.0	276.4	222.8	168.0	118.5	34.3
52.5°	464.9	458.4	439.3	406.6	366.1	319.8	268.3	214.9	159.3	108.7	26.1
55°	459.5	453.5	433.6	401.7	358.7	312.1	260.7	206.5	150.9	98.6	18.8
57.5°	451.0	445.6	426.5	393.8	351.3	303.7	252.2	197.2	140.3	88.5	13.1
60°	440.7	435.2	416.7	384.9	342.9	294.2	242.9	187.7	130.7	78.4	8.2
62.5°	429.8	424.6	405.3	373.7	332.3	284.1	232.9	178.1	120.7	69.2	4.9
65°	415.4	410.5	393.0	360.3	320.6	273.2	221.7	166.7	110.3	58.8	2.7
67.5°	400.1	395.7	378.0	348.1	307.0	261.2	210.3	155.5	99.4	49.8	1.4
70°	383.8	378.3	362.0	331.5	293.1	247.6	197.7	144.1	89.1	41.1	0.0
72.5°	364.7	360.6	344.8	315.9	277.0	233.1	184.9	131.6	77.6	32.7	0.3
75°	346.2	341.0	326.6	299.3	261.2	217.9	170.8	119.8	66.5	25.1	0.3
77.5°	322.2	320.6	307.0	280.5	246.2	203.2	155.2	105.7	55.8	18.0	0.3
80°	298.2	296.6	286.0	261.7	228.8	185.8	140.8	92.3	45.5	12.0	0.3
82.5°	274.5	272.4	262.3	242.1	211.1	171.0	125.8	79.0	36.0	7.4	0.3
85°	253.3	250.6	239.7	221.2	192.8	154.4	110.3	65.9	26.7	4.1	0.5
87.5°	235.1	233.1	221.2	202.1	174.3	138.9	96.7	53.4	18.8	1.9	0.8
90°	219.5	215.4	204.8	184.7	156.9	121.7	82.3	42.8	12.5	1.1	1.1
92.5°	204.3	200.7	189.0	168.3	141.4	107.0	68.4	32.7	7.9	0.5	1.4
95°	188.5	184.7	173.2	154.2	125.6	92.1	56.1	24.0	4.4	0.5	1.4
97.5°	173.0	169.4	157.4	138.4	111.4	79.0	44.4	16.9	2.2	0.5	1.1
100°	158.5	154.4	143.5	124.5	97.2	65.9	34.3	10.9	1.4	0.5	1.1
102.5°	143.3	140.0	128.8	110.3	82.5	53.7	25.6	6.8	0.5	0.5	0.8
105°	129.6	125.6	114.7	95.6	70.3	42.2	18.0	4.1	0.5	0.5	0.8



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CATALOG NUMBER: FCC-X-2-LD4-1LO-30-UNV-93-87-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	84.4	81.2	71.6	55.6	35.7	16.6	4.9	0.8	0.8	0.8	0.8
115°	70.5	65.6	57.2	43.0	26.4	10.9	2.5	0.8	0.8	0.8	0.8
117.5°	56.4	52.3	46.3	32.7	17.4	7.1	1.4	0.8	0.8	0.8	0.8
120°	44.1	40.3	33.5	22.6	11.7	4.1	0.5	0.8	0.8	0.8	0.8
122.5°	31.6	28.6	22.6	14.7	7.1	1.9	0.8	0.8	1.1	1.1	0.8
125°	21.0	19.3	15.0	9.0	4.4	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	13.6	12.3	8.7	5.2	1.9	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.6	6.8	5.2	3.0	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.4	4.1	2.7	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1
135°	1.1	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.1	1.4	1.4	1.4	1.1
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.1
142.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
145°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.1	1.1	1.1
147.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
150°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
152.5°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
155°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
157.5°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
160°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1	1.1
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.4
172.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
175°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
177.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.1
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	213.8	213.8	213.8
2.5°	203.5	199.6	198.6
5°	192.6	186.3	182.8
7.5°	181.7	173.2	169.1
10°	171.6	159.6	155.2
12.5°	159.6	145.7	138.9
15°	148.2	130.2	123.7
17.5°	135.4	115.2	107.6
20°	123.4	100.2	92.3
22.5°	109.8	85.5	76.8
25°	97.5	70.8	61.0
27.5°	83.9	55.8	47.4
30°	71.1	42.8	34.3
32.5°	58.8	31.3	23.7
35°	47.4	21.2	15.0
37.5°	36.5	13.1	7.6
40°	26.4	6.8	3.5
42.5°	17.7	3.3	1.9
45°	10.9	1.6	0.0
47.5°	6.3	0.0	0.0
50°	3.3	0.0	0.0
52.5°	1.4	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°	0.3	0.3	0.3
77.5°	0.3	0.5	0.8
80°	0.5	1.1	1.4
82.5°	1.1	1.4	1.4
85°	1.1	1.4	1.6
87.5°	1.4	1.6	1.9
90°	1.6	1.9	1.9
92.5°	1.6	2.2	2.2
95°	1.9	2.2	2.5
97.5°	2.2	2.5	2.5
100°	1.9	2.5	2.7
102.5°	1.6	2.5	2.5
105°	1.4	1.9	2.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.1	1.4	1.4
115°	0.8	1.1	1.4
117.5°	0.8	1.1	1.1
120°	0.8	0.8	1.1
122.5°	0.8	0.8	1.1
125°	0.8	0.8	1.1
127.5°	1.1	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.1	0.8	0.8
135°	1.1	0.8	0.8
137.5°	1.1	0.8	0.8
140°	1.1	0.8	0.8
142.5°	1.1	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.1	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



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







107.5°	114.4	111.1	100.2	82.3	57.5	32.1	12.0	2.2	0.5	0.8	0.8
110°	99.7	97.0	85.8	68.4	46.3	24.0	7.9	1.4	0.8	0.8	0.8





107.5°	1.1	1.6	1.9
110°	1.1	1.4	1.6



(END OF REPORT)