

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: P550583

Luminaire Tested: **FCC-X-2-LD4-1HI-40-UNV-82-84-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: P550583
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-82-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

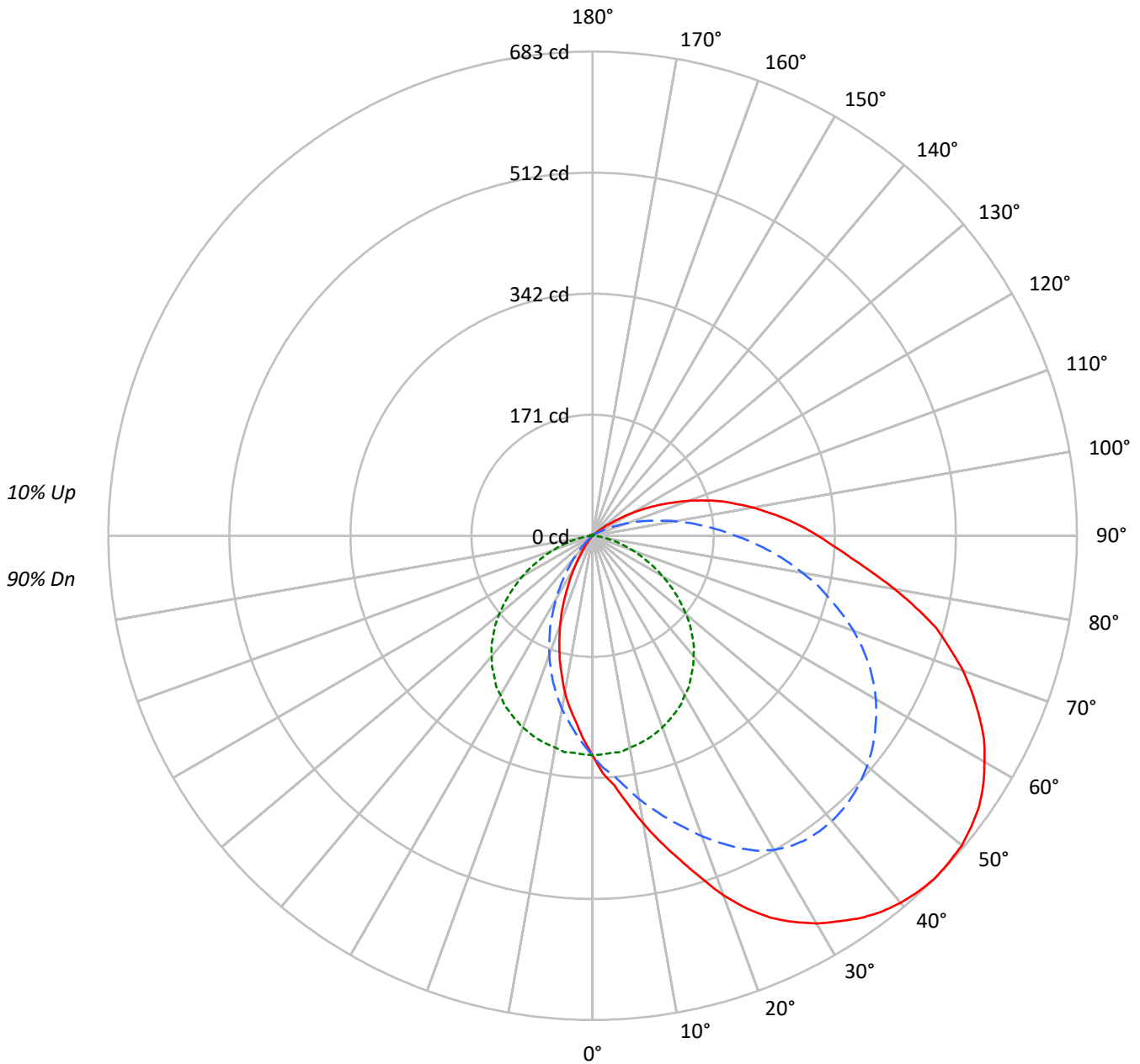
Lumens per Lamp: N/A
Luminaire Lumens: 1531.1 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

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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°	3334	3334	3334
5°	3659	3284	2740
10°	4141	3245	2259
15°	4640	3203	1760
20°	5234	3151	1296
25°	5726	3091	851
30°	6092	3009	479
35°	6408	2922	211
40°	6689	2814	50
45°	6930	2679	0
50°	7132	2501	0
55°	7286	2274	0
60°	7364	2010	0
65°	7394	1711	0
70°	7370	1396	0
75°	7276	1029	6
80°	6981	631	32
85°	6748	300	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.7	1.9
10°-20°	88.8	5.8
20°-30°	143.8	9.4
30°-40°	184.8	12.1
40°-50°	209.2	13.7
50°-60°	216.7	14.2
60°-70°	204.4	13.3
70°-80°	171.3	11.2
80°-90°	124.1	8.1
90°-100°	81.6	5.3
100°-110°	47.1	3.1
110°-120°	20.8	1.4
120°-130°	5.6	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	262.3	17.1
0°-40°	447.1	29.2
0°-60°	872.9	57.0
0°-90°	1372.7	89.7
90°-120°	149.6	9.8
90°-150°	157.4	10.3
90°-180°	158.0	10.3
0°-180°	1531.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	310	310	310	310	310	
5°	354	339	307	279	265	36
15°	472	414	297	215	179	136
25°	594	486	275	141	88	275
35°	658	524	242	69	22	413
45°	683	519	198	16	0	527
55°	666	486	143	0	0	594
65°	602	430	85	0	0	595
75°	501	347	36	0	0	526
85°	367	252	6	2	2	313
90°	318	202	2	2	3	174
95°	273	158	1	3	4	214
105°	188	81	1	2	3	198
115°	102	27	1	1	2	102
125°	30	4	2	1	2	30
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	1	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°	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7
2.5°	335.7	335.3	334.1	332.2	329.4	324.7	320.7	317.2	312.4	308.5	301.0
5°	353.5	351.5	349.9	348.0	341.6	337.3	330.2	322.3	314.8	307.3	292.3
7.5°	381.9	378.7	376.4	370.8	362.2	352.3	341.2	333.7	328.6	307.7	282.1
10°	412.3	409.5	404.8	394.9	384.2	370.0	354.3	336.5	320.7	303.4	273.0
12.5°	442.2	438.3	431.6	419.0	404.0	386.2	364.5	343.6	321.1	300.6	262.3
15°	472.2	467.9	460.8	445.4	425.7	402.4	376.0	349.5	323.1	297.1	251.3
17.5°	505.0	499.0	488.4	471.0	446.2	417.4	386.2	354.3	322.3	292.7	239.5
20°	540.1	531.8	520.3	497.1	467.9	434.0	396.5	359.0	321.9	287.6	226.0
22.5°	569.3	561.0	548.4	524.3	489.2	447.8	405.2	362.2	320.3	281.7	213.4
25°	594.5	587.8	574.0	546.4	509.3	462.4	413.4	364.5	318.0	275.4	200.0
27.5°	614.2	607.9	592.5	564.1	526.3	475.4	419.8	365.7	314.8	269.1	186.2
30°	631.6	625.3	606.7	577.6	537.7	485.6	426.1	366.1	310.9	259.6	171.2
32.5°	645.0	639.1	620.2	589.0	545.6	492.7	429.6	365.7	305.7	252.9	155.0
35°	658.4	652.5	630.4	597.3	551.5	495.9	432.4	363.7	299.4	241.8	139.7
37.5°	668.7	662.0	639.5	602.8	554.3	496.7	432.0	361.0	292.7	232.8	124.3
40°	675.8	668.7	644.6	606.0	555.1	495.5	428.8	356.2	284.8	221.3	108.1
42.5°	680.5	672.6	647.0	610.7	553.5	492.3	424.1	350.3	276.2	211.5	92.7
45°	682.9	674.6	647.4	606.7	550.7	486.4	417.0	342.8	266.7	198.0	77.3
47.5°	681.7	672.6	645.4	602.4	545.6	480.1	409.1	333.7	255.2	186.2	62.7
50°	679.7	670.3	641.1	596.9	538.5	472.2	400.4	322.7	243.4	171.6	49.7
52.5°	673.4	663.9	636.3	589.0	530.2	463.1	388.6	311.3	230.8	157.4	37.9
55°	665.5	656.8	628.0	581.9	519.6	452.1	377.5	299.0	218.6	142.8	27.2
57.5°	653.3	645.4	617.8	570.5	508.9	439.9	365.3	285.6	203.2	128.2	18.9
60°	638.3	630.4	603.6	557.4	496.7	426.1	351.9	271.8	189.4	113.6	11.8
62.5°	622.5	615.0	587.0	541.3	481.3	411.5	337.3	258.0	174.8	100.2	7.1
65°	601.6	594.5	569.3	521.9	464.3	395.7	321.1	241.4	159.8	85.2	3.9
67.5°	579.5	573.2	547.6	504.2	444.6	378.3	304.6	225.3	144.0	72.2	2.0
70°	555.9	548.0	524.3	480.1	424.5	358.6	286.4	208.7	129.0	59.6	0.0
72.5°	528.2	522.3	499.4	457.6	401.2	337.7	267.9	190.5	112.4	47.3	0.4
75°	501.4	493.9	473.0	433.6	378.3	315.6	247.4	173.6	96.3	36.3	0.4
77.5°	466.7	464.3	444.6	406.3	356.6	294.3	224.9	153.1	80.9	26.0	0.4
80°	432.0	429.6	414.2	379.1	331.4	269.1	204.0	133.7	65.9	17.4	0.4
82.5°	397.7	394.5	379.9	350.7	305.7	247.7	182.3	114.4	52.1	10.7	0.4
85°	366.9	362.9	347.2	320.3	279.3	223.7	159.8	95.5	38.7	5.9	0.8
87.5°	340.5	337.7	320.3	292.7	252.5	201.2	140.0	77.3	27.2	2.8	1.2
90°	318.0	312.1	296.7	267.5	227.2	176.3	119.1	61.9	18.1	1.6	1.6
92.5°	295.9	290.7	273.8	243.8	204.7	155.0	99.0	47.3	11.4	0.8	2.0
95°	273.0	267.5	250.9	223.3	181.9	133.3	81.3	34.7	6.3	0.8	2.0
97.5°	250.5	245.4	228.0	200.4	161.4	114.4	64.3	24.5	3.2	0.8	1.6
100°	229.6	223.7	207.9	180.3	140.8	95.5	49.7	15.8	2.0	0.8	1.6
102.5°	207.5	202.8	186.6	159.8	119.5	77.7	37.1	9.9	0.8	0.8	1.2
105°	187.8	181.9	166.1	138.5	101.8	61.1	26.0	5.9	0.8	0.8	1.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	122.3	117.6	103.8	80.5	51.7	24.1	7.1	1.2	1.2	1.2	1.2
115°	102.2	95.1	82.8	62.3	38.3	15.8	3.6	1.2	1.2	1.2	1.2
117.5°	81.7	75.7	67.1	47.3	25.2	10.3	2.0	1.2	1.2	1.2	1.2
120°	63.9	58.4	48.5	32.7	17.0	5.9	0.8	1.2	1.2	1.2	1.2
122.5°	45.8	41.4	32.7	21.3	10.3	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.4	28.0	21.7	13.0	6.3	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.7	17.8	12.6	7.5	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.0	9.9	7.5	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.3	5.9	3.9	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	309.7	309.7	309.7
2.5°	294.7	289.2	287.6
5°	278.9	269.8	264.7
7.5°	263.1	250.9	245.0
10°	248.5	231.2	224.9
12.5°	231.2	211.1	201.2
15°	214.6	188.6	179.1
17.5°	196.1	166.9	155.8
20°	178.7	145.2	133.7
22.5°	159.0	123.9	111.2
25°	141.2	102.6	88.4
27.5°	121.5	80.9	68.6
30°	103.0	61.9	49.7
32.5°	85.2	45.4	34.3
35°	68.6	30.8	21.7
37.5°	52.9	18.9	11.0
40°	38.3	9.9	5.1
42.5°	25.6	4.7	2.8
45°	15.8	2.4	0.0
47.5°	9.1	0.0	0.0
50°	4.7	0.0	0.0
52.5°	2.0	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	3.9
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	165.7	161.0	145.2	119.1	83.2	46.6	17.4	3.2	0.8	1.2	1.2
110°	144.4	140.4	124.3	99.0	67.1	34.7	11.4	2.0	1.2	1.2	1.2





107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)