

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: P556896

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-84-EDD-90**

Issue Date: 7/16/2021

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: P556896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-12-4-LD4-1STD-50-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

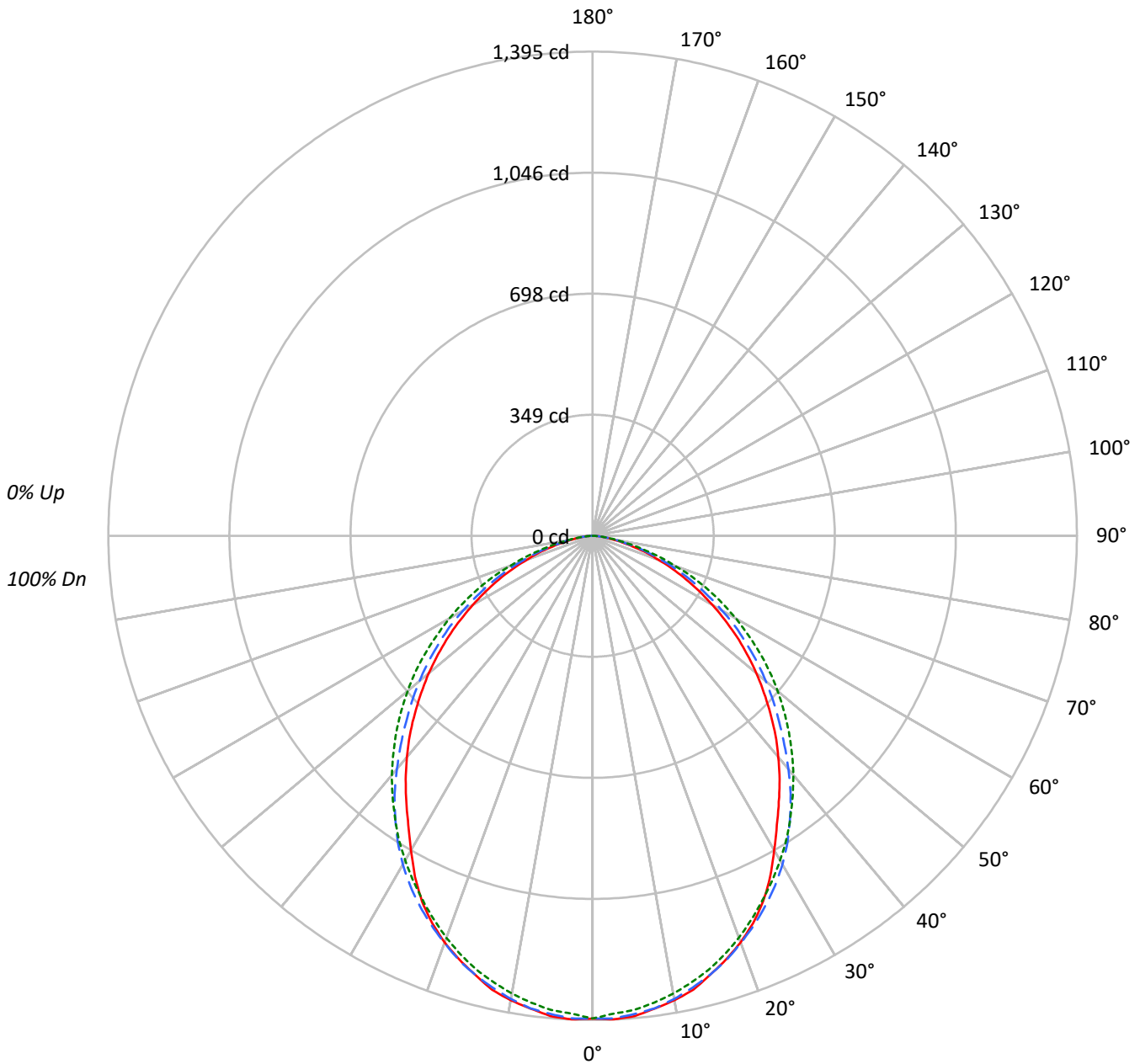
Lumens per Lamp: N/A
Luminaire Lumens: 3216.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3743	3743	3743
5°	3753	3737	3705
10°	3713	3703	3660
15°	3647	3647	3605
20°	3570	3574	3528
25°	3452	3495	3439
30°	3251	3397	3356
35°	3072	3256	3261
40°	2922	3080	3161
45°	2755	2893	3042
50°	2579	2727	2912
55°	2379	2537	2755
60°	2143	2315	2562
65°	1892	2059	2330
70°	1577	1753	1980
75°	1239	1399	1550
80°	886	986	1093
85°	577	577	543



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	4.1
10°-20°	367.9	11.4
20°-30°	537.6	16.7
30°-40°	610.2	19.0
40°-50°	589.1	18.3
50°-60°	485.9	15.1
60°-70°	323.6	10.1
70°-80°	144.8	4.5
80°-90°	25.9	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1036.4	32.2
0°-40°	1646.7	51.2
0°-60°	2721.7	84.6
0°-90°	3216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1389	1389	1383	1376	1372	131
15°	1309	1312	1309	1303	1294	369
25°	1163	1172	1177	1169	1158	532
35°	935	948	991	996	993	586
45°	724	736	760	795	799	559
55°	507	516	541	571	587	453
65°	297	305	323	346	366	295
75°	119	126	135	141	149	130
85°	19	19	19	18	18	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.8	1390.8	1390.8	1390.8	1390.8
2.5°	1394.6	1395.1	1391.9	1383.4	1378.0
5°	1389.2	1388.7	1383.4	1375.9	1371.6
7.5°	1373.7	1374.8	1373.2	1362.5	1356.6
10°	1358.8	1359.3	1355.0	1346.5	1339.5
12.5°	1339.5	1339.0	1333.1	1328.9	1317.6
15°	1309.1	1312.3	1309.1	1303.2	1294.1
17.5°	1279.7	1279.7	1281.8	1271.7	1264.7
20°	1246.6	1248.2	1248.2	1240.2	1232.1
22.5°	1208.1	1212.9	1214.5	1206.0	1196.3
25°	1162.7	1171.8	1177.1	1168.6	1158.4
27.5°	1107.6	1121.5	1137.6	1131.2	1119.9
30°	1046.2	1066.5	1093.2	1087.9	1079.9
32.5°	988.0	1008.3	1045.1	1043.0	1038.7
35°	935.1	947.9	991.2	996.5	992.8
37.5°	884.8	896.6	937.2	949.5	946.3
40°	831.9	844.8	876.8	898.7	899.8
42.5°	779.6	791.9	818.0	849.6	849.6
45°	724.0	736.3	760.3	795.1	799.3
47.5°	669.5	682.3	705.8	740.6	747.5
50°	616.1	627.8	651.3	685.0	695.7
52.5°	560.5	573.3	596.3	627.3	642.8
55°	507.1	515.6	540.7	570.7	587.2
57.5°	451.5	459.5	487.8	513.5	530.6
60°	398.1	408.2	430.1	456.3	476.1
62.5°	346.8	357.5	376.2	399.1	421.6
65°	297.1	305.1	323.3	346.2	366.0
67.5°	249.0	255.9	274.1	290.1	311.0
70°	200.4	209.5	222.8	238.3	251.7
72.5°	161.4	165.1	176.3	187.5	201.4
75°	119.2	125.6	134.6	141.1	149.1
77.5°	85.5	89.2	94.6	99.9	107.4
80°	57.2	58.8	63.6	64.7	70.5
82.5°	34.7	35.8	36.9	37.4	39.5
85°	18.7	18.7	18.7	17.6	17.6
87.5°	10.7	10.7	9.1	7.5	5.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







(END OF REPORT)