

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: P556709

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-93-86-EDD**

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: P556709
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-30-UNV-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

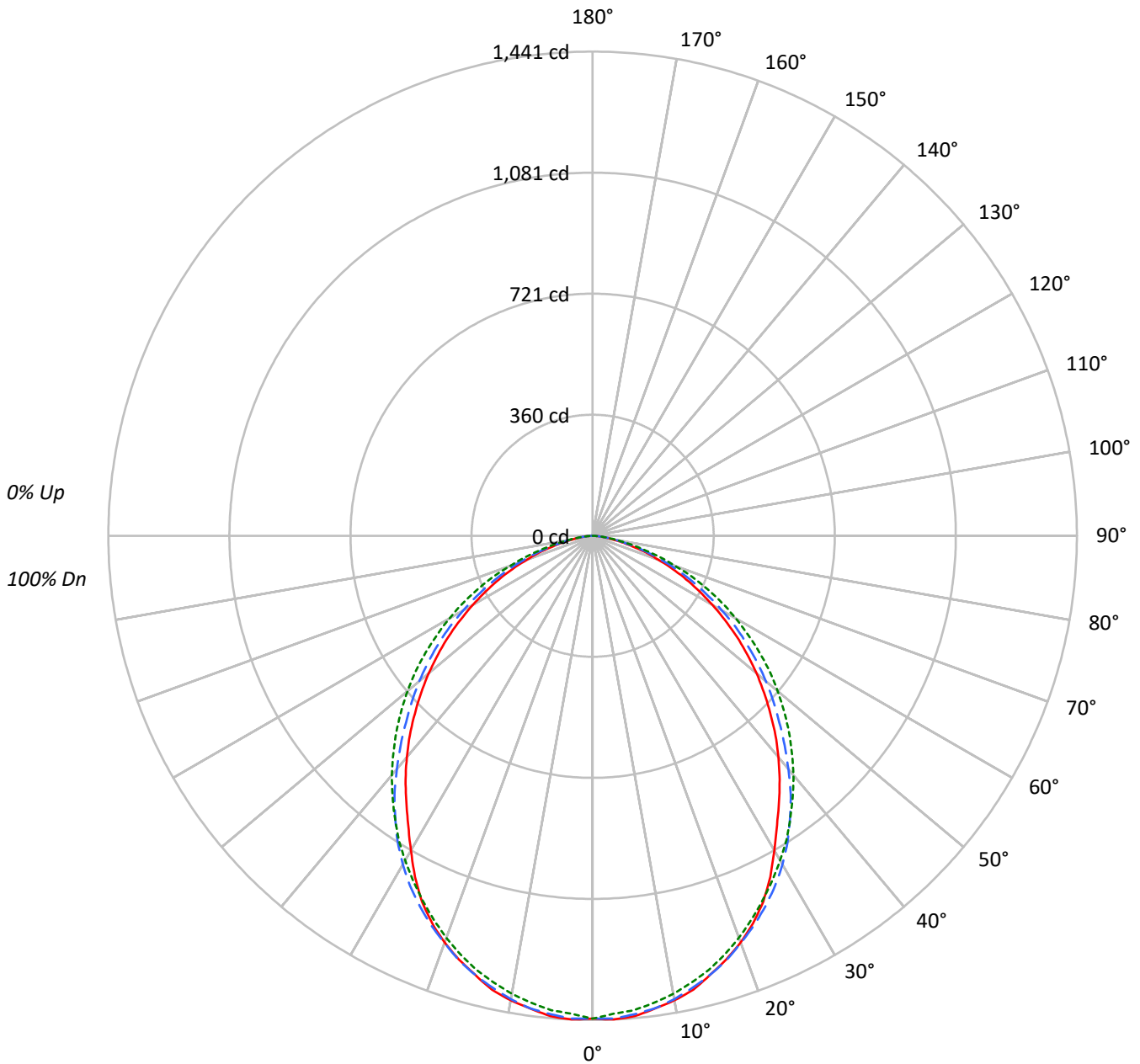
Lumens per Lamp: N/A
Luminaire Lumens: 3323.0 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3867	3867	3867
5°	3878	3861	3828
10°	3836	3826	3782
15°	3768	3768	3725
20°	3688	3693	3646
25°	3567	3611	3554
30°	3359	3510	3467
35°	3174	3364	3370
40°	3020	3183	3266
45°	2847	2990	3143
50°	2665	2817	3009
55°	2458	2621	2847
60°	2214	2392	2647
65°	1955	2127	2408
70°	1629	1811	2046
75°	1280	1446	1601
80°	916	1018	1130
85°	596	596	562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.3	4.1
10°-20°	380.1	11.4
20°-30°	555.5	16.7
30°-40°	630.5	19.0
40°-50°	608.7	18.3
50°-60°	502.1	15.1
60°-70°	334.4	10.1
70°-80°	149.6	4.5
80°-90°	26.8	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°	1070.9	32.2
0°-40°	1701.4	51.2
0°-60°	2812.2	84.6
0°-90°	3323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1437	1437	1437	1437	1437	
5°	1436	1435	1429	1422	1417	136
15°	1353	1356	1353	1347	1337	381
25°	1201	1211	1216	1207	1197	550
35°	966	979	1024	1030	1026	605
45°	748	761	786	822	826	577
55°	524	533	559	590	607	468
65°	307	315	334	358	378	304
75°	123	130	139	146	154	135
85°	19	19	19	18	18	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1437.1	1437.1	1437.1	1437.1	1437.1
2.5°	1441.0	1441.5	1438.2	1429.4	1423.9
5°	1435.5	1434.9	1429.4	1421.7	1417.2
7.5°	1419.4	1420.5	1418.9	1407.9	1401.8
10°	1404.0	1404.5	1400.1	1391.3	1384.1
12.5°	1384.1	1383.6	1377.5	1373.1	1361.5
15°	1352.6	1356.0	1352.6	1346.6	1337.2
17.5°	1322.3	1322.3	1324.5	1314.0	1306.8
20°	1288.0	1289.7	1289.7	1281.4	1273.1
22.5°	1248.3	1253.3	1254.9	1246.1	1236.1
25°	1201.4	1210.8	1216.3	1207.4	1196.9
27.5°	1144.5	1158.9	1175.4	1168.8	1157.2
30°	1081.0	1102.0	1129.6	1124.1	1115.8
32.5°	1020.8	1041.8	1079.9	1077.7	1073.3
35°	966.2	979.4	1024.1	1029.7	1025.8
37.5°	914.3	926.4	968.4	981.1	977.8
40°	859.6	872.9	906.0	928.6	929.7
42.5°	805.5	818.2	845.3	877.8	877.8
45°	748.1	760.8	785.6	821.5	825.9
47.5°	691.8	705.0	729.3	765.2	772.4
50°	636.6	648.7	673.0	707.8	718.8
52.5°	579.2	592.4	616.1	648.2	664.2
55°	523.9	532.8	558.7	589.6	606.8
57.5°	466.5	474.8	504.1	530.6	548.2
60°	411.3	421.8	444.4	471.5	491.9
62.5°	358.3	369.4	388.7	412.4	435.6
65°	307.0	315.2	334.0	357.8	378.2
67.5°	257.3	264.5	283.2	299.8	321.3
70°	207.0	216.4	230.2	246.2	260.0
72.5°	166.7	170.6	182.2	193.8	208.1
75°	123.1	129.7	139.1	145.8	154.0
77.5°	88.3	92.2	97.7	103.2	111.0
80°	59.1	60.7	65.7	66.8	72.9
82.5°	35.9	37.0	38.1	38.6	40.9
85°	19.3	19.3	19.3	18.2	18.2
87.5°	11.0	11.0	9.4	7.7	5.5
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)