

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: P556833

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-84-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: P556833
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-40-UNV-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

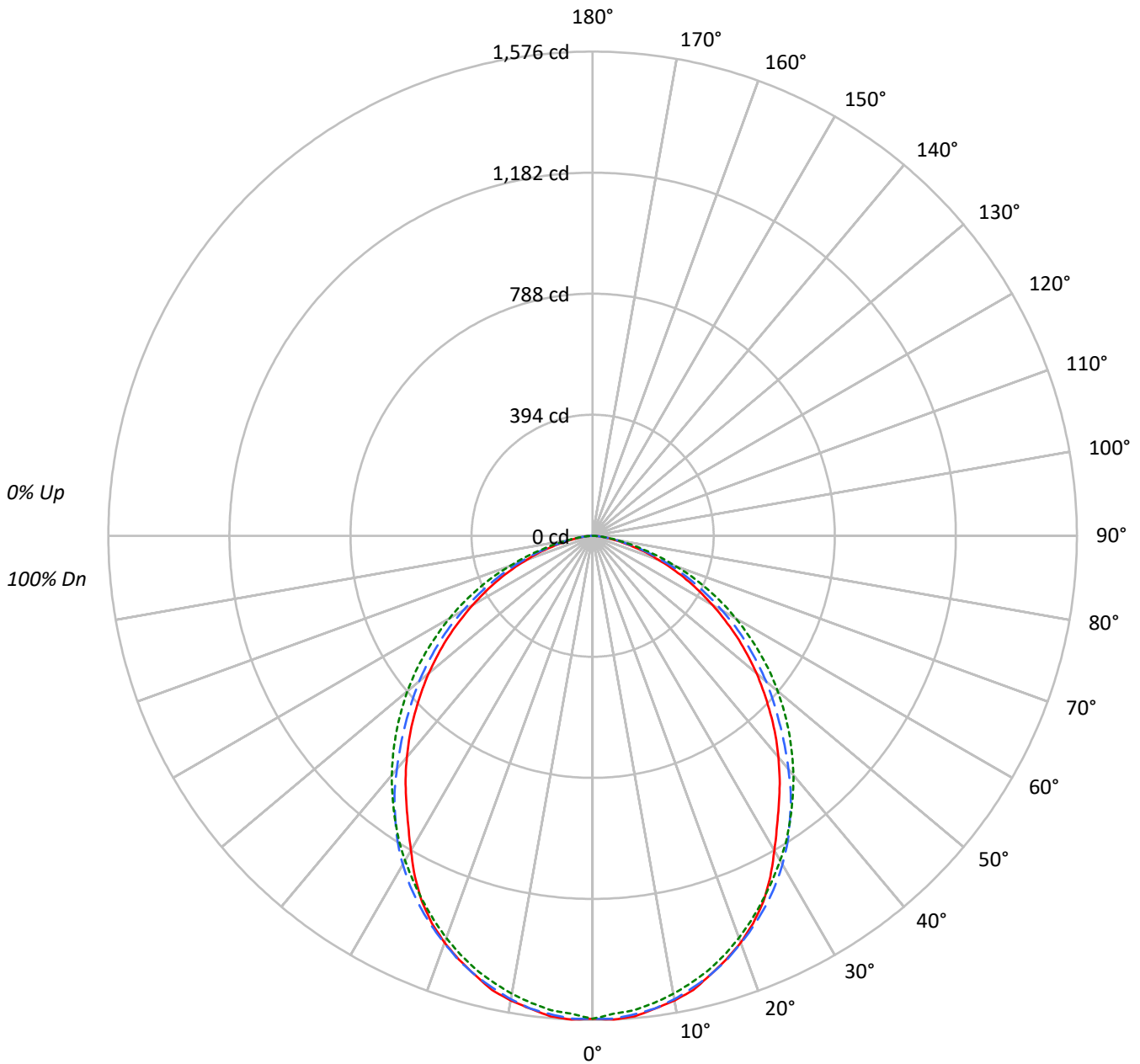
Lumens per Lamp: N/A
Luminaire Lumens: 3635.0 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4230	4230	4230
5°	4242	4224	4188
10°	4197	4185	4137
15°	4122	4122	4075
20°	4035	4040	3988
25°	3902	3950	3888
30°	3674	3840	3793
35°	3472	3680	3686
40°	3303	3482	3573
45°	3114	3271	3438
50°	2915	3082	3292
55°	2689	2867	3114
60°	2421	2617	2896
65°	2138	2327	2634
70°	1782	1981	2238
75°	1400	1582	1752
80°	1001	1114	1235
85°	651	651	614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.0	4.1
10°-20°	415.8	11.4
20°-30°	607.6	16.7
30°-40°	689.7	19.0
40°-50°	665.8	18.3
50°-60°	549.3	15.1
60°-70°	365.8	10.1
70°-80°	163.7	4.5
80°-90°	29.3	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°	1171.5	32.2
0°-40°	1861.2	51.2
0°-60°	3076.3	84.6
0°-90°	3635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3635.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1570	1570	1564	1555	1550	149
15°	1480	1483	1480	1473	1463	417
25°	1314	1324	1330	1321	1309	602
35°	1057	1071	1120	1126	1122	662
45°	818	832	859	899	904	631
55°	573	583	611	645	664	512
65°	336	345	365	391	414	333
75°	135	142	152	159	168	147
85°	21	21	21	20	20	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1572.0	1572.0	1572.0	1572.0	1572.0
2.5°	1576.3	1576.9	1573.3	1563.6	1557.5
5°	1570.2	1569.6	1563.6	1555.1	1550.3
7.5°	1552.7	1553.9	1552.1	1540.0	1533.4
10°	1535.8	1536.4	1531.6	1521.9	1514.1
12.5°	1514.1	1513.5	1506.8	1502.0	1489.3
15°	1479.6	1483.3	1479.6	1473.0	1462.7
17.5°	1446.4	1446.4	1448.8	1437.4	1429.5
20°	1409.0	1410.8	1410.8	1401.7	1392.7
22.5°	1365.5	1370.9	1372.7	1363.1	1352.2
25°	1314.2	1324.4	1330.5	1320.8	1309.3
27.5°	1252.0	1267.7	1285.8	1278.5	1265.8
30°	1182.5	1205.5	1235.7	1229.6	1220.6
32.5°	1116.7	1139.6	1181.3	1178.9	1174.1
35°	1056.9	1071.4	1120.3	1126.3	1122.1
37.5°	1000.1	1013.4	1059.3	1073.2	1069.6
40°	940.3	954.8	991.1	1015.8	1017.0
42.5°	881.1	895.0	924.6	960.3	960.3
45°	818.3	832.2	859.4	898.7	903.5
47.5°	756.7	771.2	797.8	837.1	844.9
50°	696.3	709.6	736.2	774.2	786.3
52.5°	633.5	648.0	674.0	709.0	726.5
55°	573.1	582.8	611.2	645.0	663.7
57.5°	510.3	519.4	551.4	580.4	599.7
60°	449.9	461.4	486.2	515.8	538.1
62.5°	392.0	404.0	425.2	451.1	476.5
65°	335.8	344.8	365.4	391.4	413.7
67.5°	281.4	289.3	309.8	327.9	351.5
70°	226.5	236.7	251.8	269.4	284.5
72.5°	182.4	186.6	199.3	212.0	227.7
75°	134.7	141.9	152.2	159.4	168.5
77.5°	96.6	100.9	106.9	112.9	121.4
80°	64.6	66.4	71.9	73.1	79.7
82.5°	39.3	40.5	41.7	42.3	44.7
85°	21.1	21.1	21.1	19.9	19.9
87.5°	12.1	12.1	10.3	8.5	6.0
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)