

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: P556843

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-93-94-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: P556843
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-93-94-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND
4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

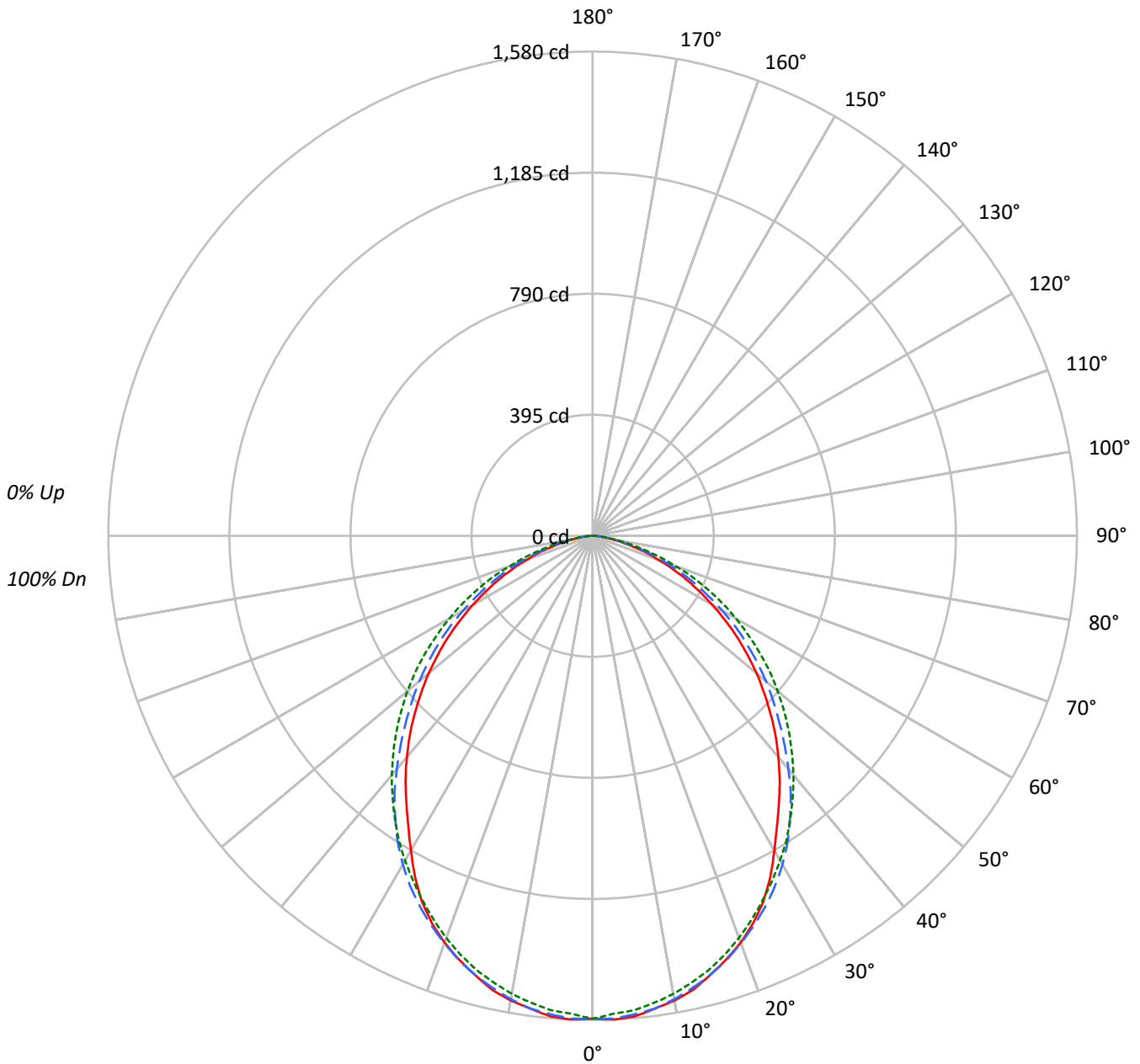
Lumens per Lamp: N/A
Luminaire Lumens: 3644.0 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4241	4241	4241
5°	4252	4234	4198
10°	4207	4195	4147
15°	4132	4132	4085
20°	4045	4050	3998
25°	3912	3960	3897
30°	3683	3849	3802
35°	3481	3689	3695
40°	3312	3490	3581
45°	3122	3279	3447
50°	2923	3090	3300
55°	2696	2875	3122
60°	2427	2623	2903
65°	2143	2332	2641
70°	1786	1987	2244
75°	1404	1587	1756
80°	1004	1116	1238
85°	655	655	618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	4.1
10°-20°	416.8	11.4
20°-30°	609.1	16.7
30°-40°	691.4	19.0
40°-50°	667.5	18.3
50°-60°	550.6	15.1
60°-70°	366.7	10.1
70°-80°	164.1	4.5
80°-90°	29.4	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°	1174.4	32.2
0°-40°	1865.8	51.2
0°-60°	3083.9	84.6
0°-90°	3644.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3644.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1574	1574	1568	1559	1554	149
15°	1483	1487	1483	1477	1466	418
25°	1317	1328	1334	1324	1313	603
35°	1060	1074	1123	1129	1125	664
45°	820	834	862	901	906	633
55°	575	584	613	647	665	513
65°	337	346	366	392	415	334
75°	135	142	153	160	169	148
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°	1575.9	1575.9	1575.9	1575.9	1575.9
2.5°	1580.2	1580.8	1577.1	1567.5	1561.4
5°	1574.1	1573.5	1567.5	1559.0	1554.1
7.5°	1556.6	1557.8	1556.0	1543.8	1537.2
10°	1539.6	1540.2	1535.4	1525.7	1517.8
12.5°	1517.8	1517.2	1510.5	1505.7	1493.0
15°	1483.3	1486.9	1483.3	1476.6	1466.4
17.5°	1450.0	1450.0	1452.4	1440.9	1433.1
20°	1412.5	1414.3	1414.3	1405.2	1396.1
22.5°	1368.9	1374.3	1376.1	1366.5	1355.6
25°	1317.4	1327.7	1333.8	1324.1	1312.6
27.5°	1255.1	1270.8	1289.0	1281.7	1269.0
30°	1185.4	1208.4	1238.7	1232.7	1223.6
32.5°	1119.4	1142.4	1184.2	1181.8	1177.0
35°	1059.5	1074.0	1123.1	1129.1	1124.9
37.5°	1002.6	1015.9	1061.9	1075.9	1072.2
40°	942.7	957.2	993.5	1018.3	1019.5
42.5°	883.3	897.2	926.9	962.6	962.6
45°	820.4	834.3	861.5	900.9	905.7
47.5°	758.6	773.1	799.8	839.1	847.0
50°	698.1	711.4	738.0	776.2	788.3
52.5°	635.1	649.6	675.7	710.8	728.3
55°	574.6	584.2	612.7	646.6	665.4
57.5°	511.6	520.7	552.8	581.8	601.2
60°	451.0	462.5	487.4	517.0	539.4
62.5°	392.9	405.0	426.2	452.3	477.7
65°	336.6	345.7	366.3	392.3	414.7
67.5°	282.1	290.0	310.6	328.7	352.4
70°	227.0	237.3	252.5	270.0	285.2
72.5°	182.8	187.1	199.8	212.5	228.2
75°	135.0	142.3	152.6	159.8	168.9
77.5°	96.9	101.1	107.2	113.2	121.7
80°	64.8	66.6	72.0	73.3	79.9
82.5°	39.4	40.6	41.8	42.4	44.8
85°	21.2	21.2	21.2	20.0	20.0
87.5°	12.1	12.1	10.3	8.5	6.1
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)