

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: P556811

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-81-94-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: P556811
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-81-94-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC 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

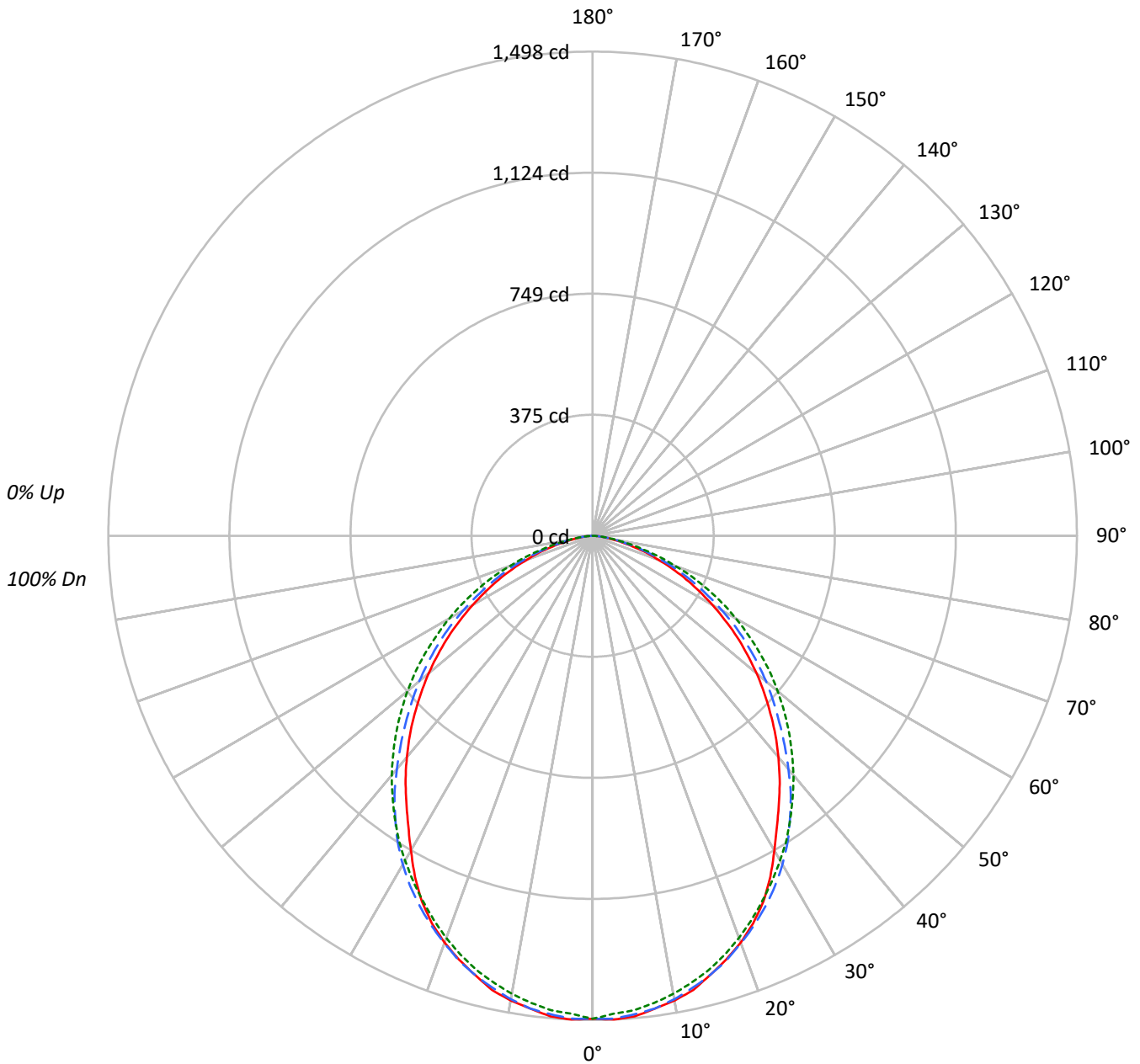
Lumens per Lamp: N/A
Luminaire Lumens: 3455.0 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4021	4021	4021
5°	4032	4015	3980
10°	3989	3978	3932
15°	3918	3918	3873
20°	3835	3840	3791
25°	3709	3755	3695
30°	3492	3649	3605
35°	3300	3498	3504
40°	3140	3309	3396
45°	2960	3108	3268
50°	2771	2929	3129
55°	2556	2725	2960
60°	2302	2487	2753
65°	2032	2211	2504
70°	1694	1884	2127
75°	1331	1504	1666
80°	951	1058	1175
85°	621	621	584



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.7	4.1
10°-20°	395.2	11.4
20°-30°	577.5	16.7
30°-40°	655.6	19.0
40°-50°	632.9	18.3
50°-60°	522.1	15.1
60°-70°	347.7	10.1
70°-80°	155.6	4.5
80°-90°	27.8	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°	1113.4	32.2
0°-40°	1769.0	51.2
0°-60°	2923.9	84.6
0°-90°	3455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3455.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1492	1492	1486	1478	1474	141
15°	1406	1410	1406	1400	1390	396
25°	1249	1259	1265	1255	1244	572
35°	1005	1018	1065	1071	1066	629
45°	778	791	817	854	859	600
55°	545	554	581	613	631	486
65°	319	328	347	372	393	316
75°	128	135	145	152	160	140
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1494.2	1494.2	1494.2	1494.2	1494.2
2.5°	1498.2	1498.8	1495.3	1486.2	1480.4
5°	1492.5	1491.9	1486.2	1478.1	1473.5
7.5°	1475.8	1477.0	1475.3	1463.8	1457.5
10°	1459.8	1460.3	1455.7	1446.6	1439.1
12.5°	1439.1	1438.5	1432.2	1427.6	1415.6
15°	1406.4	1409.8	1406.4	1400.1	1390.3
17.5°	1374.8	1374.8	1377.1	1366.2	1358.7
20°	1339.2	1340.9	1340.9	1332.3	1323.7
22.5°	1297.9	1303.0	1304.8	1295.6	1285.3
25°	1249.1	1258.8	1264.6	1255.4	1244.5
27.5°	1190.0	1204.9	1222.1	1215.2	1203.2
30°	1123.9	1145.8	1174.5	1168.7	1160.1
32.5°	1061.4	1083.2	1122.8	1120.5	1115.9
35°	1004.6	1018.3	1064.8	1070.6	1066.5
37.5°	950.6	963.2	1006.8	1020.1	1016.6
40°	893.8	907.5	942.0	965.5	966.7
42.5°	837.5	850.7	878.8	912.7	912.7
45°	777.8	791.0	816.8	854.2	858.7
47.5°	719.3	733.0	758.3	795.6	803.1
50°	661.9	674.5	699.7	735.9	747.4
52.5°	602.2	615.9	640.6	673.9	690.6
55°	544.8	553.9	580.9	613.1	630.9
57.5°	485.1	493.7	524.1	551.6	570.0
60°	427.7	438.6	462.1	490.2	511.5
62.5°	372.5	384.0	404.1	428.8	452.9
65°	319.2	327.8	347.3	372.0	393.2
67.5°	267.5	275.0	294.5	311.7	334.1
70°	215.3	225.0	239.4	256.0	270.4
72.5°	173.4	177.4	189.4	201.5	216.4
75°	128.0	134.9	144.7	151.5	160.2
77.5°	91.8	95.9	101.6	107.3	115.4
80°	61.4	63.1	68.3	69.5	75.8
82.5°	37.3	38.5	39.6	40.2	42.5
85°	20.1	20.1	20.1	18.9	18.9
87.5°	11.5	11.5	9.8	8.0	5.7
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)