

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: P556390

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-87-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: P556390
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-LD4-1HI-50-UNV-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

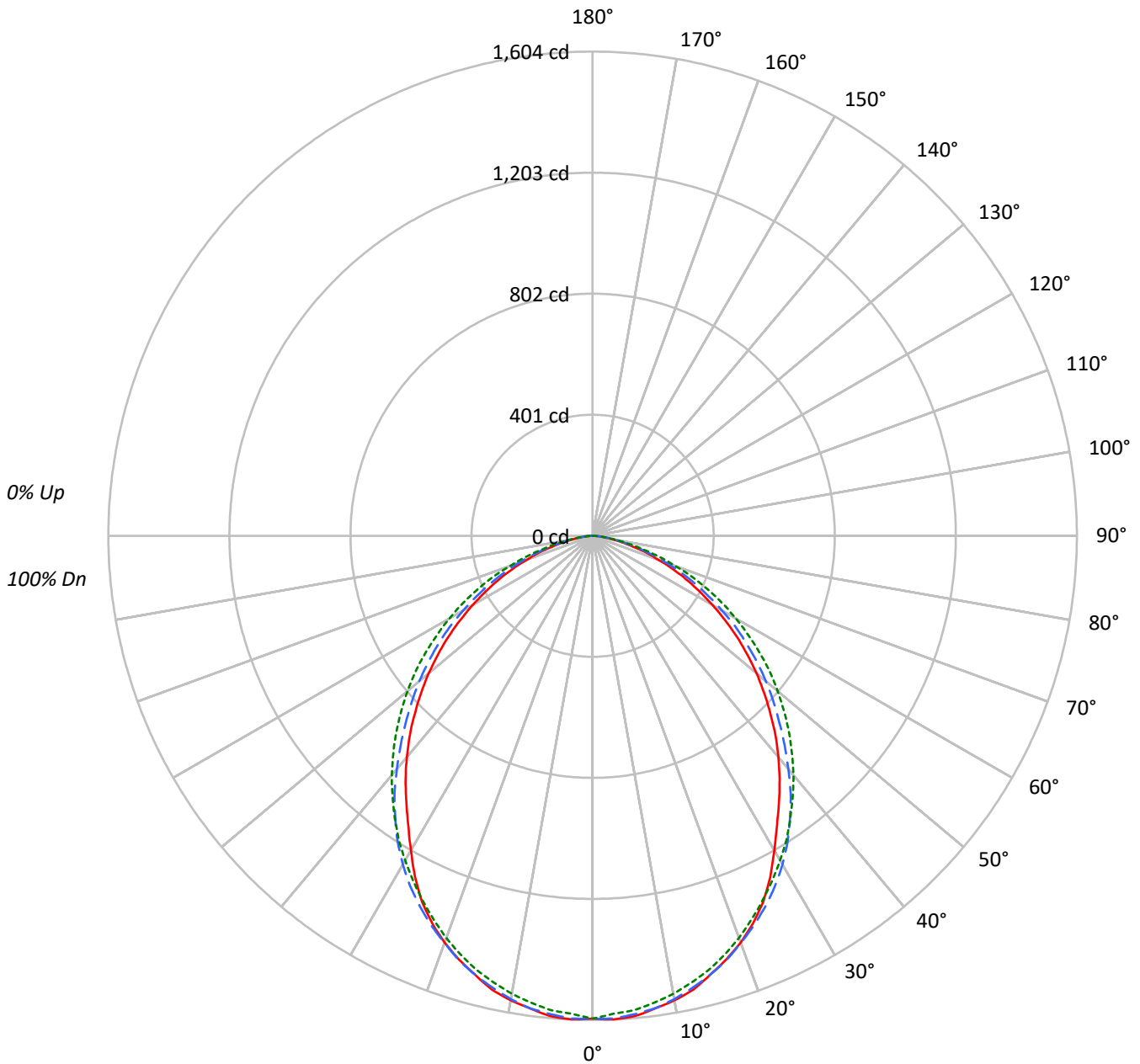
Lumens per Lamp: N/A
Luminaire Lumens: 3699.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4305	4305	4305
5°	4316	4298	4262
10°	4270	4259	4210
15°	4195	4195	4147
20°	4106	4111	4058
25°	3971	4020	3956
30°	3739	3907	3859
35°	3533	3745	3751
40°	3361	3543	3635
45°	3169	3328	3499
50°	2966	3136	3350
55°	2736	2918	3169
60°	2464	2662	2947
65°	2176	2367	2681
70°	1814	2017	2278
75°	1424	1611	1783
80°	1020	1133	1257
85°	664	664	627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.6	4.1
10°-20°	423.1	11.4
20°-30°	618.3	16.7
30°-40°	701.9	19.0
40°-50°	677.6	18.3
50°-60°	558.9	15.1
60°-70°	372.2	10.1
70°-80°	166.5	4.5
80°-90°	29.8	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°	1192.1	32.2
0°-40°	1893.9	51.2
0°-60°	3130.4	84.6
0°-90°	3699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1600	1600	1600	1600	1600	
5°	1598	1597	1591	1582	1578	151
15°	1506	1509	1506	1499	1488	424
25°	1337	1348	1354	1344	1332	612
35°	1076	1090	1140	1146	1142	674
45°	833	847	874	914	919	643
55°	583	593	622	656	675	521
65°	342	351	372	398	421	339
75°	137	144	155	162	172	150
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1599.7	1599.7	1599.7	1599.7	1599.7
2.5°	1604.0	1604.6	1601.0	1591.1	1585.0
5°	1597.9	1597.3	1591.1	1582.5	1577.6
7.5°	1580.1	1581.3	1579.4	1567.1	1560.4
10°	1562.8	1563.5	1558.5	1548.7	1540.7
12.5°	1540.7	1540.1	1533.3	1528.4	1515.5
15°	1505.7	1509.4	1505.7	1498.9	1488.5
17.5°	1471.9	1471.9	1474.3	1462.7	1454.7
20°	1433.8	1435.6	1435.6	1426.4	1417.2
22.5°	1389.5	1395.1	1396.9	1387.1	1376.0
25°	1337.3	1347.7	1353.9	1344.1	1332.4
27.5°	1274.0	1290.0	1308.4	1301.0	1288.1
30°	1203.3	1226.7	1257.4	1251.3	1242.0
32.5°	1136.3	1159.7	1202.1	1199.6	1194.7
35°	1075.5	1090.2	1140.0	1146.2	1141.9
37.5°	1017.7	1031.2	1078.0	1092.1	1088.4
40°	956.9	971.6	1008.5	1033.7	1034.9
42.5°	896.7	910.8	940.9	977.2	977.2
45°	832.7	846.9	874.5	914.5	919.4
47.5°	770.1	784.8	811.8	851.8	859.8
50°	708.6	722.1	749.2	787.9	800.2
52.5°	644.7	659.4	685.9	721.5	739.3
55°	583.2	593.1	621.9	656.4	675.4
57.5°	519.3	528.5	561.1	590.6	610.3
60°	457.9	469.5	494.7	524.8	547.6
62.5°	398.9	411.1	432.7	459.1	484.9
65°	341.7	350.9	371.8	398.2	421.0
67.5°	286.4	294.4	315.3	333.7	357.7
70°	230.5	240.9	256.3	274.1	289.5
72.5°	185.6	189.9	202.8	215.7	231.7
75°	137.0	144.4	154.9	162.2	171.5
77.5°	98.3	102.6	108.8	114.9	123.5
80°	65.8	67.6	73.1	74.4	81.1
82.5°	39.9	41.2	42.4	43.0	45.5
85°	21.5	21.5	21.5	20.3	20.3
87.5°	12.3	12.3	10.4	8.6	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)