

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: P556324

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-86-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: P556324
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-40-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

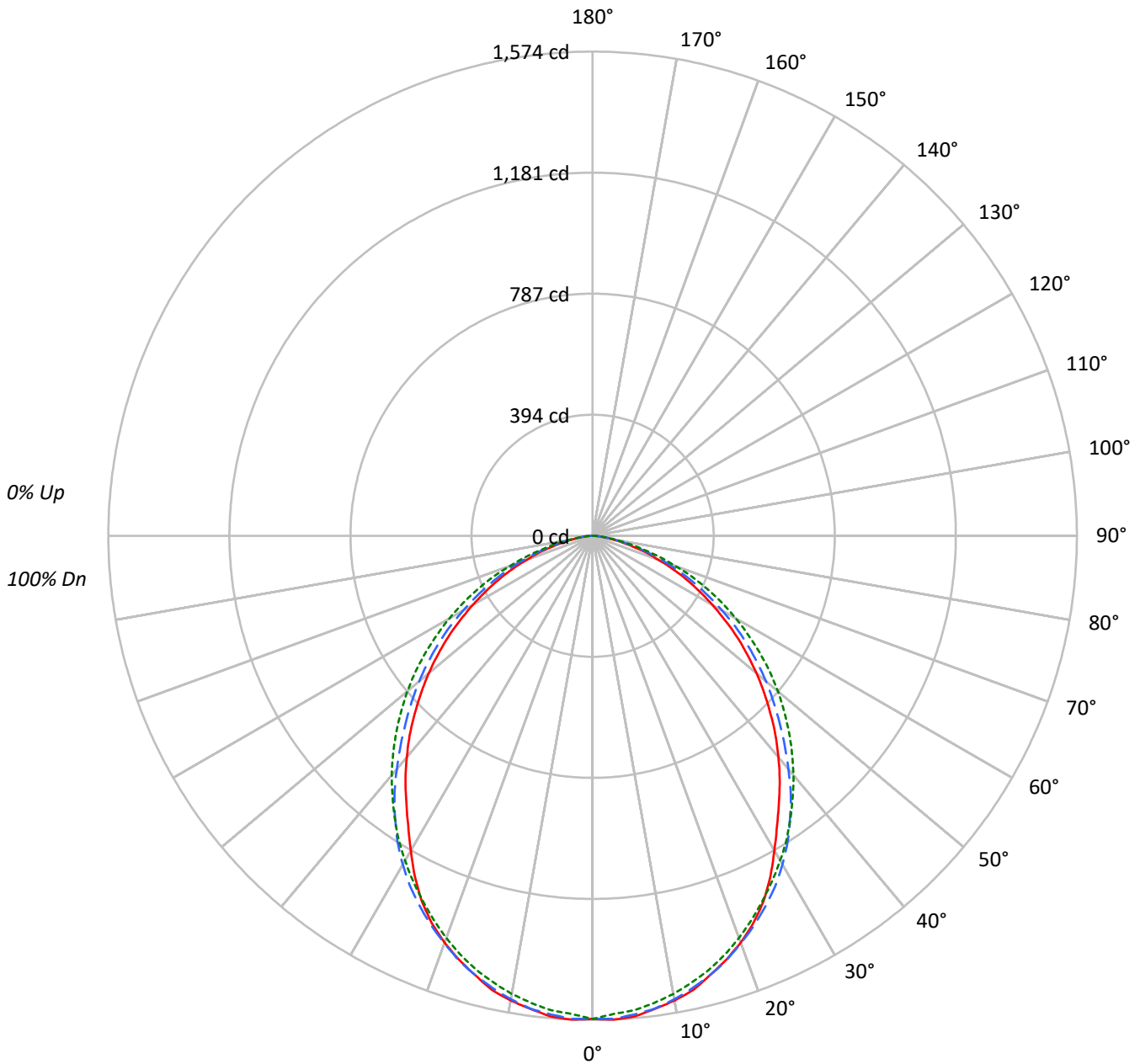
Lumens per Lamp: N/A
Luminaire Lumens: 3631.0 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4226	4226	4226
5°	4237	4219	4183
10°	4192	4180	4133
15°	4118	4118	4070
20°	4030	4035	3984
25°	3898	3946	3883
30°	3670	3835	3788
35°	3468	3676	3682
40°	3300	3478	3569
45°	3111	3267	3435
50°	2912	3079	3288
55°	2686	2864	3111
60°	2419	2613	2893
65°	2136	2324	2631
70°	1780	1980	2235
75°	1398	1580	1750
80°	1000	1113	1234
85°	651	651	614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	4.1
10°-20°	415.3	11.4
20°-30°	607.0	16.7
30°-40°	689.0	19.0
40°-50°	665.1	18.3
50°-60°	548.7	15.1
60°-70°	365.4	10.1
70°-80°	163.5	4.5
80°-90°	29.2	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°	1170.2	32.2
0°-40°	1859.1	51.2
0°-60°	3072.9	84.6
0°-90°	3631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3631.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1570	1570	1570	1570	1570	
5°	1568	1568	1562	1553	1549	148
15°	1478	1482	1478	1471	1461	417
25°	1313	1323	1329	1319	1308	601
35°	1056	1070	1119	1125	1121	661
45°	817	831	858	898	902	631
55°	572	582	610	644	663	511
65°	335	344	365	391	413	333
75°	134	142	152	159	168	147
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.3	1570.3	1570.3	1570.3	1570.3
2.5°	1574.5	1575.1	1571.5	1561.9	1555.8
5°	1568.5	1567.9	1561.9	1553.4	1548.6
7.5°	1551.0	1552.2	1550.4	1538.3	1531.7
10°	1534.1	1534.7	1529.9	1520.2	1512.4
12.5°	1512.4	1511.8	1505.2	1500.3	1487.7
15°	1478.0	1481.6	1478.0	1471.4	1461.1
17.5°	1444.8	1444.8	1447.2	1435.8	1427.9
20°	1407.4	1409.2	1409.2	1400.2	1391.1
22.5°	1364.0	1369.4	1371.2	1361.6	1350.7
25°	1312.7	1323.0	1329.0	1319.4	1307.9
27.5°	1250.6	1266.3	1284.4	1277.1	1264.5
30°	1181.2	1204.1	1234.3	1228.3	1219.2
32.5°	1115.4	1138.4	1180.0	1177.6	1172.8
35°	1055.7	1070.2	1119.1	1125.1	1120.9
37.5°	999.0	1012.3	1058.1	1072.0	1068.4
40°	939.3	953.8	990.0	1014.7	1015.9
42.5°	880.2	894.0	923.6	959.2	959.2
45°	817.4	831.3	858.5	897.7	902.5
47.5°	755.9	770.4	796.9	836.1	844.0
50°	695.6	708.8	735.4	773.4	785.5
52.5°	632.8	647.3	673.3	708.2	725.7
55°	572.5	582.2	610.5	644.3	663.0
57.5°	509.8	518.8	550.8	579.7	599.0
60°	449.4	460.9	485.6	515.2	537.5
62.5°	391.5	403.6	424.7	450.6	476.0
65°	335.4	344.5	365.0	390.9	413.2
67.5°	281.1	289.0	309.5	327.6	351.1
70°	226.2	236.5	251.6	269.1	284.1
72.5°	182.2	186.4	199.1	211.7	227.4
75°	134.5	141.8	152.0	159.3	168.3
77.5°	96.5	100.7	106.8	112.8	121.3
80°	64.5	66.4	71.8	73.0	79.6
82.5°	39.2	40.4	41.6	42.2	44.6
85°	21.1	21.1	21.1	19.9	19.9
87.5°	12.1	12.1	10.3	8.4	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)