

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: P557410

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-85-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: P557410
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-LD4-2LO-50-UNV-93-85-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

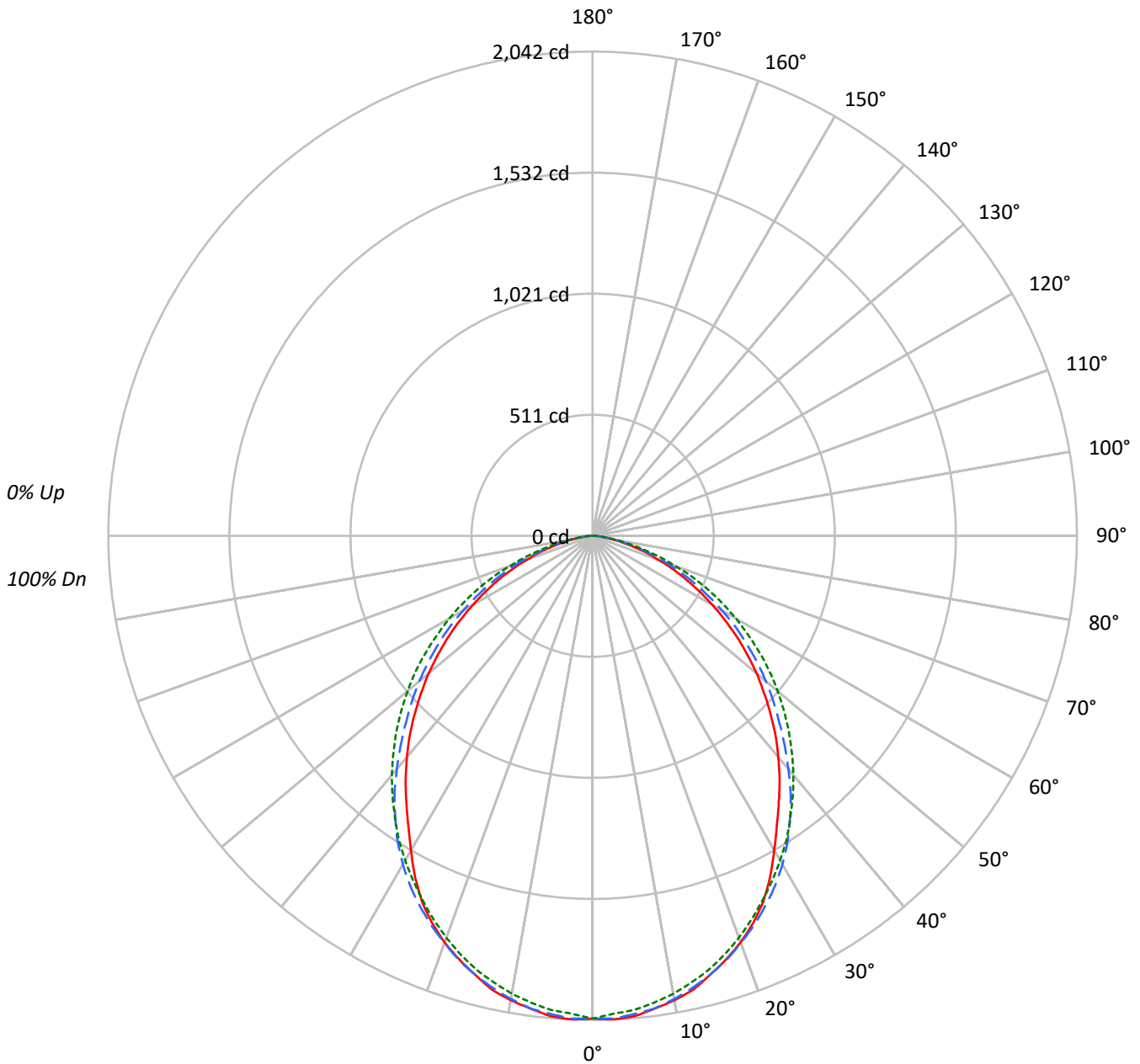
Lumens per Lamp: N/A
Luminaire Lumens: 4708.0 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5479	5479	5479
5°	5494	5470	5424
10°	5435	5420	5358
15°	5339	5339	5278
20°	5226	5233	5166
25°	5054	5116	5035
30°	4759	4973	4912
35°	4497	4767	4774
40°	4278	4509	4627
45°	4034	4236	4453
50°	3776	3992	4263
55°	3483	3714	4033
60°	3136	3389	3751
65°	2769	3013	3412
70°	2308	2567	2899
75°	1813	2049	2269
80°	1297	1443	1601
85°	846	846	797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.7	4.1
10°-20°	538.6	11.4
20°-30°	787.0	16.7
30°-40°	893.3	19.0
40°-50°	862.4	18.3
50°-60°	711.4	15.1
60°-70°	473.7	10.1
70°-80°	212.0	4.5
80°-90°	37.9	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°	1517.3	32.2
0°-40°	2410.6	51.2
0°-60°	3984.3	84.6
0°-90°	4708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2036	2036	2036	2036	2036	
5°	2034	2033	2025	2014	2008	192
15°	1916	1921	1916	1908	1894	540
25°	1702	1715	1723	1711	1696	779
35°	1369	1388	1451	1459	1453	858
45°	1060	1078	1113	1164	1170	818
55°	742	755	792	835	860	663
65°	435	447	473	507	536	431
75°	174	184	197	206	218	191
85°	27	27	27	26	26	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2036.1	2036.1	2036.1	2036.1	2036.1
2.5°	2041.6	2042.3	2037.7	2025.1	2017.3
5°	2033.7	2033.0	2025.1	2014.2	2007.9
7.5°	2011.1	2012.6	2010.3	1994.6	1986.0
10°	1989.2	1989.9	1983.7	1971.2	1961.0
12.5°	1961.0	1960.2	1951.6	1945.4	1928.9
15°	1916.4	1921.1	1916.4	1907.8	1894.5
17.5°	1873.4	1873.4	1876.5	1861.7	1851.5
20°	1824.9	1827.2	1827.2	1815.5	1803.8
22.5°	1768.6	1775.6	1778.0	1765.4	1751.4
25°	1702.1	1715.4	1723.2	1710.7	1695.8
27.5°	1621.5	1641.9	1665.3	1655.9	1639.5
30°	1531.6	1561.3	1600.4	1592.6	1580.8
32.5°	1446.3	1476.0	1530.0	1526.9	1520.6
35°	1368.9	1387.6	1451.0	1458.8	1453.3
37.5°	1295.3	1312.5	1372.0	1390.0	1385.3
40°	1217.9	1236.7	1283.6	1315.7	1317.2
42.5°	1141.2	1159.2	1197.6	1243.7	1243.7
45°	1059.9	1077.9	1113.1	1163.9	1170.2
47.5°	980.1	998.9	1033.3	1084.1	1094.3
50°	901.9	919.1	953.5	1002.8	1018.4
52.5°	820.5	839.3	872.9	918.3	941.0
55°	742.3	754.8	791.6	835.4	859.6
57.5°	661.0	672.7	714.2	751.7	776.7
60°	582.7	597.6	629.7	668.0	696.9
62.5°	507.7	523.3	550.7	584.3	617.2
65°	434.9	446.6	473.2	506.9	535.8
67.5°	364.5	374.7	401.3	424.7	455.2
70°	293.3	306.6	326.2	348.9	368.4
72.5°	236.2	241.7	258.1	274.6	294.9
75°	174.4	183.8	197.1	206.5	218.2
77.5°	125.2	130.6	138.5	146.3	157.2
80°	83.7	86.0	93.1	94.6	103.3
82.5°	50.8	52.4	54.0	54.8	57.9
85°	27.4	27.4	27.4	25.8	25.8
87.5°	15.6	15.6	13.3	11.0	7.8
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)