

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: P556391

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-87-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: P556391
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
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

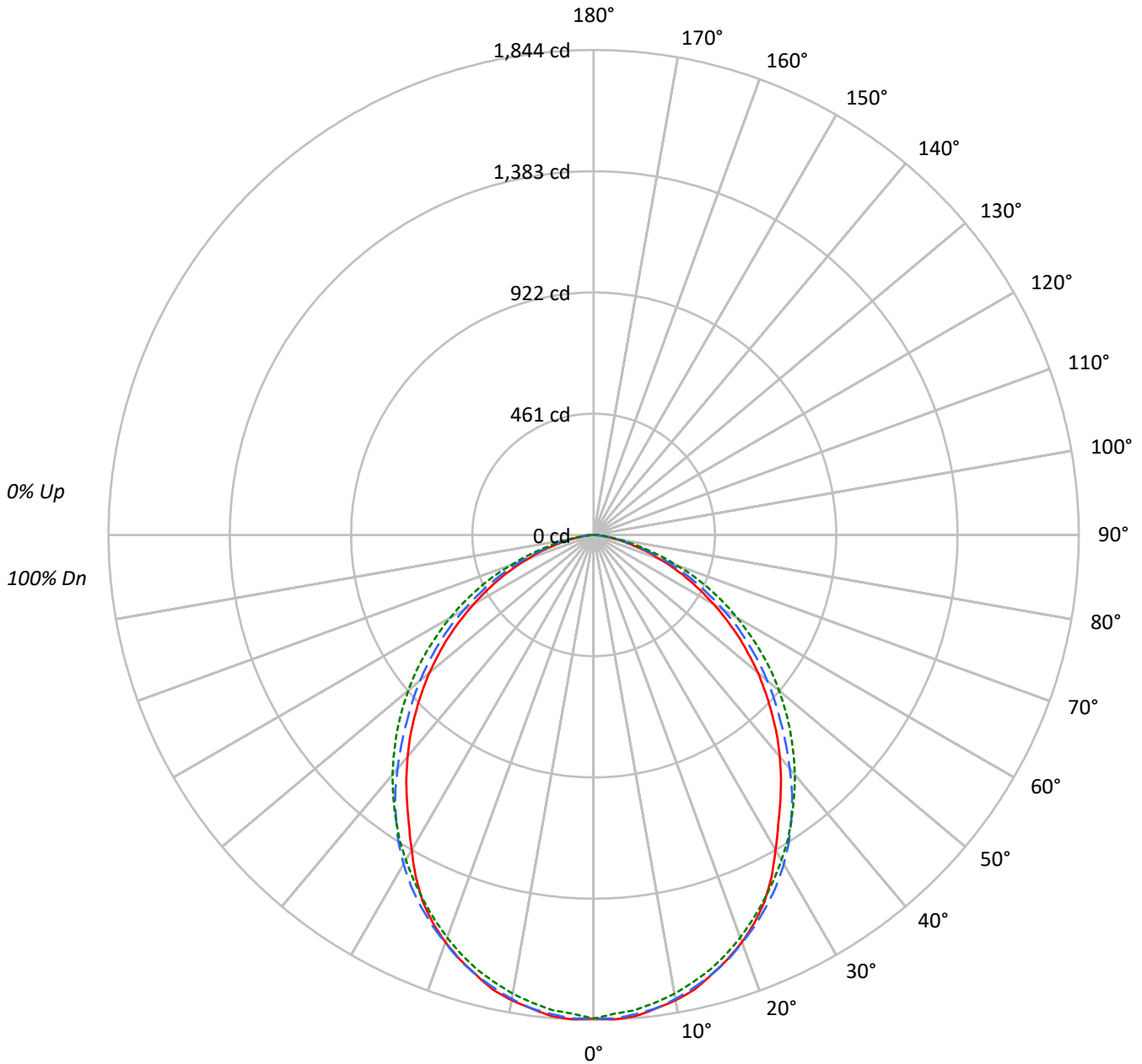
Lumens per Lamp: N/A
Luminaire Lumens: 4252.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P556391

CATALOG NUMBER: FUSL-12-4-LD4-1HI-50-UNV-93-87-EDD

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°	4948	4948	4948
5°	4962	4941	4898
10°	4909	4895	4840
15°	4822	4822	4767
20°	4720	4726	4665
25°	4564	4621	4548
30°	4298	4491	4436
35°	4061	4305	4312
40°	3864	4072	4179
45°	3643	3826	4022
50°	3410	3605	3851
55°	3145	3354	3643
60°	2833	3061	3387
65°	2501	2721	3081
70°	2084	2318	2618
75°	1638	1851	2049
80°	1172	1303	1446
85°	763	763	719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.1	4.1
10°-20°	486.4	11.4
20°-30°	710.8	16.7
30°-40°	806.8	19.0
40°-50°	778.8	18.3
50°-60°	642.5	15.1
60°-70°	427.8	10.1
70°-80°	191.5	4.5
80°-90°	34.2	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°	1370.3	32.2
0°-40°	2177.1	51.2
0°-60°	3598.4	84.6
0°-90°	4252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1839	1839	1839	1839	1839	
5°	1837	1836	1829	1819	1813	174
15°	1731	1735	1731	1723	1711	488
25°	1537	1549	1556	1545	1532	704
35°	1236	1253	1310	1318	1313	775
45°	957	974	1005	1051	1057	739
55°	670	682	715	754	776	598
65°	393	403	427	458	484	389
75°	158	166	178	186	197	172
85°	25	25	25	23	23	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1838.9	1838.9	1838.9	1838.9	1838.9
2.5°	1843.8	1844.5	1840.3	1829.0	1821.9
5°	1836.8	1836.1	1829.0	1819.1	1813.4
7.5°	1816.3	1817.7	1815.6	1801.4	1793.7
10°	1796.5	1797.2	1791.5	1780.2	1771.1
12.5°	1771.1	1770.4	1762.6	1756.9	1742.1
15°	1730.8	1735.0	1730.8	1723.0	1711.0
17.5°	1691.9	1691.9	1694.8	1681.3	1672.2
20°	1648.1	1650.3	1650.3	1639.7	1629.1
22.5°	1597.3	1603.6	1605.8	1594.4	1581.7
25°	1537.2	1549.2	1556.3	1545.0	1531.6
27.5°	1464.5	1482.8	1504.0	1495.5	1480.7
30°	1383.2	1410.1	1445.4	1438.3	1427.7
32.5°	1306.2	1333.1	1381.8	1379.0	1373.3
35°	1236.3	1253.2	1310.5	1317.5	1312.6
37.5°	1169.9	1185.4	1239.1	1255.4	1251.1
40°	1099.9	1116.9	1159.3	1188.2	1189.7
42.5°	1030.7	1047.0	1081.6	1123.2	1123.2
45°	957.2	973.5	1005.3	1051.2	1056.8
47.5°	885.2	902.1	933.2	979.1	988.3
50°	814.5	830.1	861.2	905.7	919.8
52.5°	741.1	758.0	788.4	829.4	849.9
55°	670.4	681.7	714.9	754.5	776.4
57.5°	596.9	607.5	645.0	678.9	701.5
60°	526.3	539.7	568.7	603.3	629.4
62.5°	458.5	472.6	497.3	527.7	557.4
65°	392.8	403.4	427.4	457.8	483.9
67.5°	329.2	338.4	362.4	383.6	411.2
70°	264.9	276.9	294.6	315.1	332.7
72.5°	213.3	218.3	233.1	248.0	266.3
75°	157.5	166.0	178.0	186.5	197.1
77.5°	113.0	118.0	125.0	132.1	142.0
80°	75.6	77.7	84.1	85.5	93.3
82.5°	45.9	47.3	48.7	49.5	52.3
85°	24.7	24.7	24.7	23.3	23.3
87.5°	14.1	14.1	12.0	9.9	7.1
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)