

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: P556235

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-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: P556235
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-35-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 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

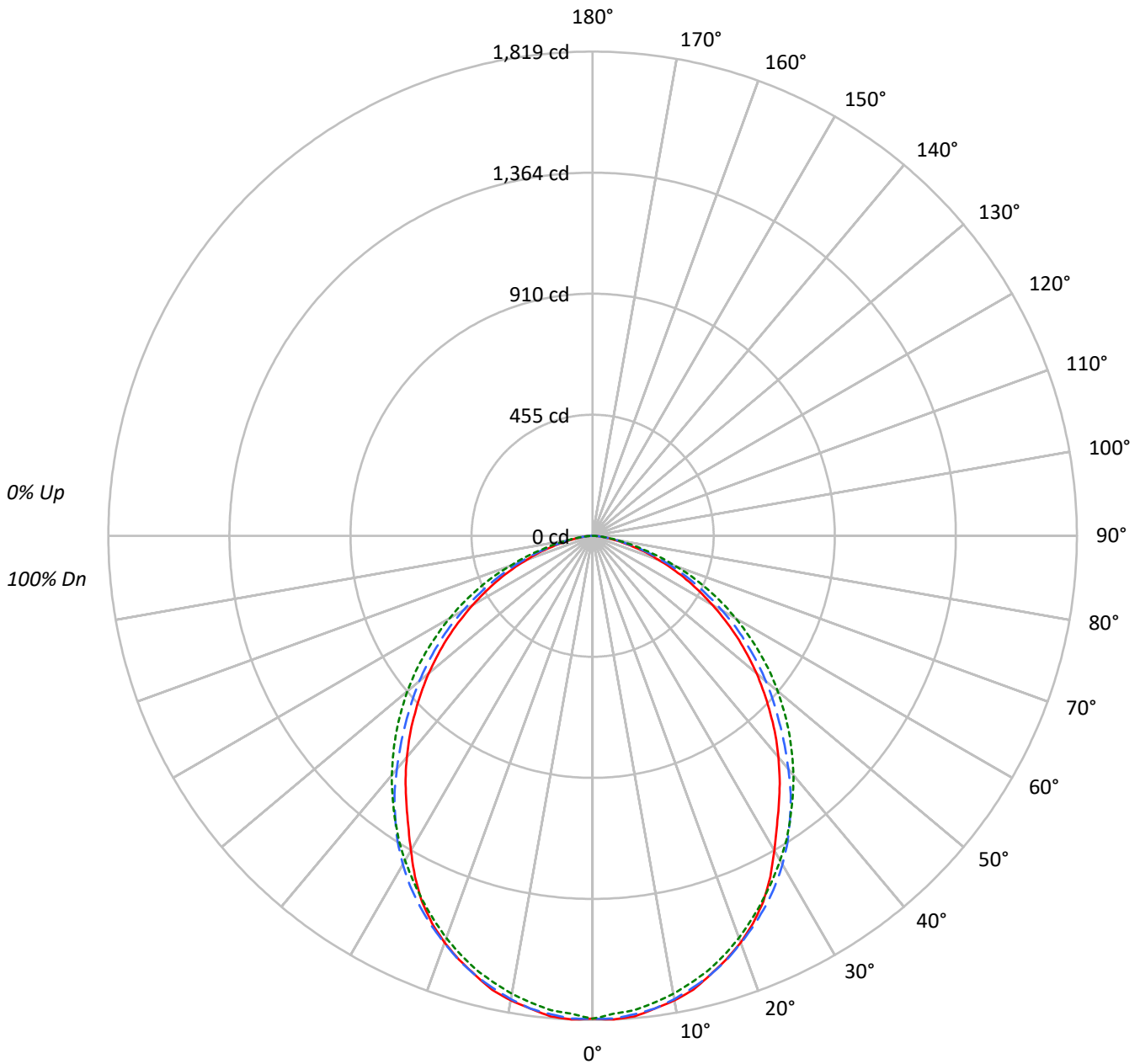
Lumens per Lamp: N/A
Luminaire Lumens: 4195.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4882	4882	4882
5°	4895	4874	4833
10°	4843	4830	4774
15°	4757	4757	4703
20°	4656	4662	4603
25°	4503	4559	4486
30°	4240	4431	4377
35°	4007	4247	4254
40°	3812	4018	4123
45°	3594	3774	3968
50°	3364	3557	3799
55°	3103	3309	3594
60°	2794	3020	3342
65°	2467	2685	3040
70°	2057	2286	2583
75°	1616	1826	2022
80°	1156	1285	1426
85°	753	753	710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.8	4.1
10°-20°	479.9	11.4
20°-30°	701.2	16.7
30°-40°	796.0	19.0
40°-50°	768.4	18.3
50°-60°	633.9	15.1
60°-70°	422.1	10.1
70°-80°	188.9	4.5
80°-90°	33.8	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°	1351.9	32.2
0°-40°	2147.9	51.2
0°-60°	3550.2	84.6
0°-90°	4195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1814	1814	1814	1814	1814	
5°	1812	1811	1804	1795	1789	172
15°	1708	1712	1708	1700	1688	481
25°	1517	1528	1535	1524	1511	695
35°	1220	1236	1293	1300	1295	764
45°	944	960	992	1037	1043	729
55°	661	673	705	744	766	590
65°	388	398	422	452	477	384
75°	155	164	176	184	194	170
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1814.2	1814.2	1814.2	1814.2	1814.2
2.5°	1819.1	1819.8	1815.6	1804.5	1797.5
5°	1812.1	1811.4	1804.5	1794.7	1789.1
7.5°	1791.9	1793.3	1791.2	1777.3	1769.6
10°	1772.4	1773.1	1767.5	1756.4	1747.3
12.5°	1747.3	1746.6	1739.0	1733.4	1718.7
15°	1707.6	1711.8	1707.6	1699.9	1688.1
17.5°	1669.3	1669.3	1672.0	1658.8	1649.7
20°	1626.0	1628.1	1628.1	1617.7	1607.2
22.5°	1575.9	1582.1	1584.2	1573.1	1560.5
25°	1516.6	1528.5	1535.4	1524.3	1511.0
27.5°	1444.8	1463.0	1483.9	1475.5	1460.9
30°	1364.7	1391.2	1426.0	1419.0	1408.6
32.5°	1288.7	1315.2	1363.3	1360.5	1354.9
35°	1219.7	1236.4	1292.9	1299.9	1295.0
37.5°	1154.2	1169.5	1222.5	1238.5	1234.3
40°	1085.2	1101.9	1143.7	1172.3	1173.7
42.5°	1016.9	1032.9	1067.1	1108.2	1108.2
45°	944.4	960.4	991.8	1037.1	1042.7
47.5°	873.3	890.0	920.7	966.0	975.1
50°	803.6	818.9	849.6	893.5	907.5
52.5°	731.1	747.9	777.8	818.3	838.5
55°	661.4	672.6	705.3	744.4	766.0
57.5°	588.9	599.4	636.3	669.8	692.1
60°	519.2	532.5	561.1	595.2	621.0
62.5°	452.3	466.3	490.7	520.6	549.9
65°	387.5	398.0	421.7	451.6	477.4
67.5°	324.8	333.9	357.5	378.5	405.6
70°	261.4	273.2	290.6	310.9	328.3
72.5°	210.5	215.4	230.0	244.6	262.8
75°	155.4	163.8	175.6	184.0	194.5
77.5°	111.5	116.4	123.4	130.3	140.1
80°	74.6	76.7	82.9	84.3	92.0
82.5°	45.3	46.7	48.1	48.8	51.6
85°	24.4	24.4	24.4	23.0	23.0
87.5°	13.9	13.9	11.8	9.8	7.0
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)