

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: P556520

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-93-88-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: P556520
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-LD4-1LO-35-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

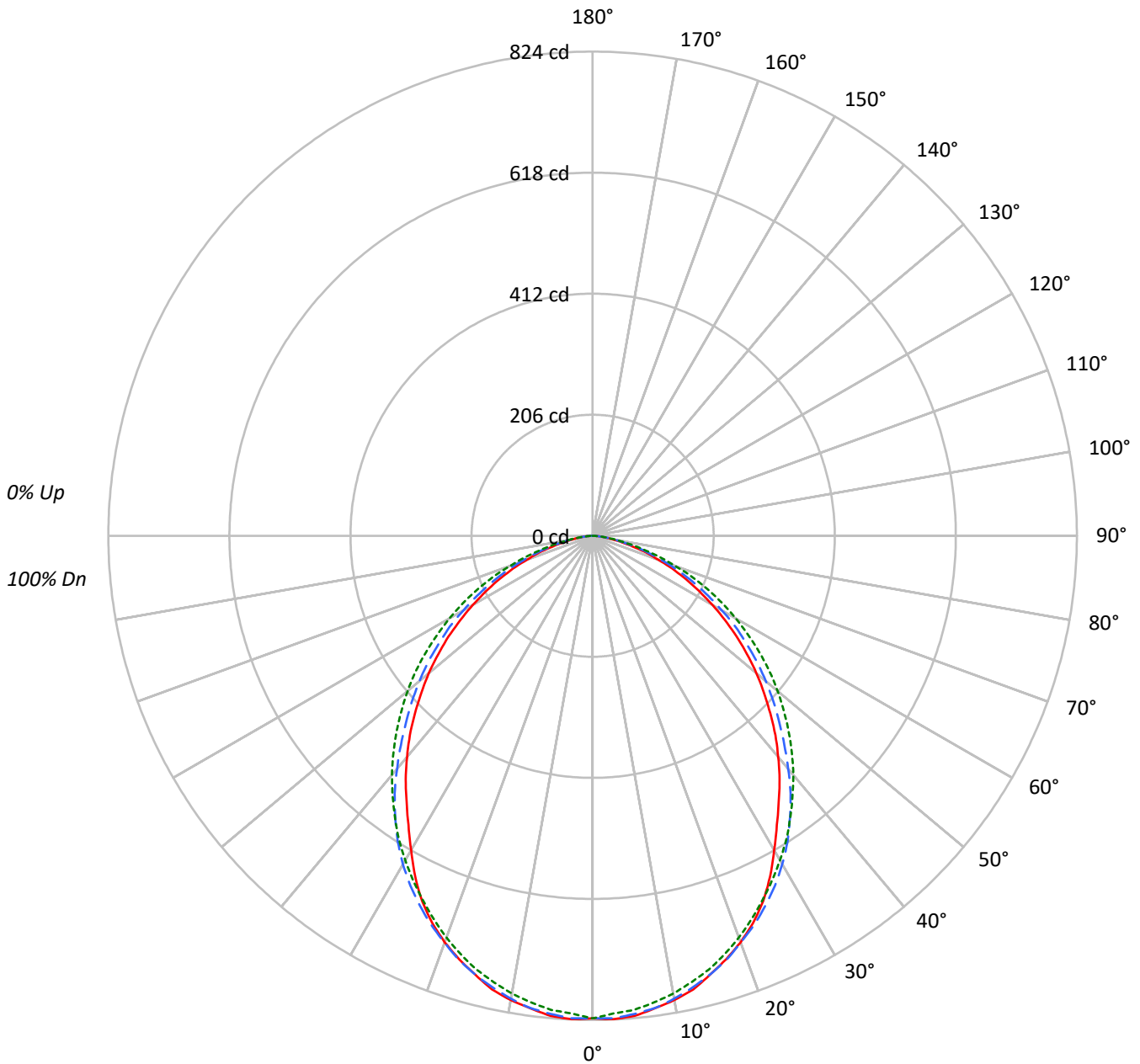
Lumens per Lamp: N/A
Luminaire Lumens: 1899.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): 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°	2210	2210	2210
5°	2216	2207	2188
10°	2192	2186	2161
15°	2154	2154	2129
20°	2108	2111	2084
25°	2038	2064	2031
30°	1920	2006	1981
35°	1814	1923	1926
40°	1725	1819	1866
45°	1627	1709	1796
50°	1523	1610	1720
55°	1405	1498	1627
60°	1265	1367	1513
65°	1117	1216	1376
70°	931	1035	1169
75°	732	827	915
80°	524	581	645
85°	340	340	321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	4.1
10°-20°	217.2	11.4
20°-30°	317.4	16.7
30°-40°	360.3	19.0
40°-50°	347.8	18.3
50°-60°	286.9	15.1
60°-70°	191.1	10.1
70°-80°	85.5	4.5
80°-90°	15.3	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°	612.0	32.2
0°-40°	972.3	51.2
0°-60°	1607.1	84.6
0°-90°	1899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	821	821	821	821	821	
5°	820	820	817	812	810	78
15°	773	775	773	770	764	218
25°	686	692	695	690	684	314
35°	552	560	585	588	586	346
45°	428	435	449	470	472	330
55°	299	304	319	337	347	267
65°	175	180	191	204	216	174
75°	70	74	80	83	88	77
85°	11	11	11	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	821.3	821.3	821.3	821.3	821.3
2.5°	823.5	823.8	821.9	816.9	813.7
5°	820.3	820.0	816.9	812.4	809.9
7.5°	811.2	811.8	810.9	804.5	801.1
10°	802.3	802.7	800.1	795.1	791.0
12.5°	791.0	790.7	787.2	784.7	778.0
15°	773.0	774.9	773.0	769.5	764.2
17.5°	755.6	755.6	756.9	750.9	746.8
20°	736.1	737.0	737.0	732.3	727.6
22.5°	713.4	716.2	717.2	712.1	706.4
25°	686.5	691.9	695.1	690.0	684.0
27.5°	654.0	662.3	671.7	667.9	661.3
30°	617.8	629.8	645.5	642.4	637.6
32.5°	583.4	595.4	617.1	615.9	613.3
35°	552.1	559.7	585.3	588.4	586.2
37.5°	522.5	529.4	553.4	560.7	558.8
40°	491.2	498.8	517.7	530.7	531.3
42.5°	460.3	467.6	483.0	501.7	501.7
45°	427.5	434.8	449.0	469.5	472.0
47.5°	395.3	402.9	416.8	437.3	441.4
50°	363.8	370.7	384.6	404.5	410.8
52.5°	331.0	338.5	352.1	370.4	379.6
55°	299.4	304.5	319.3	337.0	346.7
57.5°	266.6	271.3	288.1	303.2	313.3
60°	235.1	241.0	254.0	269.4	281.1
62.5°	204.8	211.1	222.1	235.7	248.9
65°	175.4	180.2	190.9	204.4	216.1
67.5°	147.0	151.1	161.9	171.3	183.6
70°	118.3	123.7	131.6	140.7	148.6
72.5°	95.3	97.5	104.1	110.7	118.9
75°	70.4	74.1	79.5	83.3	88.0
77.5°	50.5	52.7	55.8	59.0	63.4
80°	33.8	34.7	37.5	38.2	41.6
82.5°	20.5	21.1	21.8	22.1	23.3
85°	11.0	11.0	11.0	10.4	10.4
87.5°	6.3	6.3	5.4	4.4	3.2
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)