

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: P558311

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-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: P558311
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-LD4-3STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

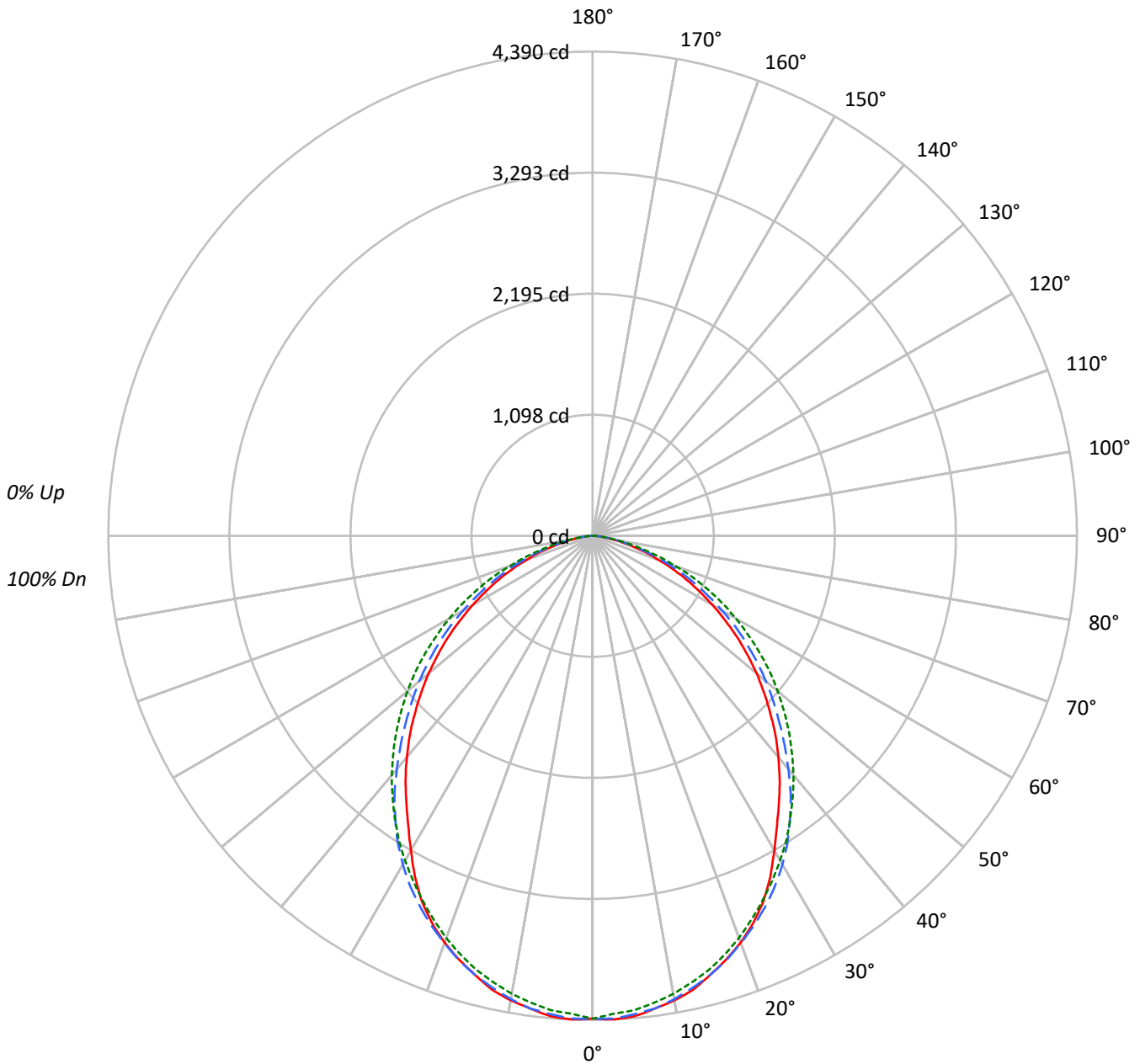
Lumens per Lamp: N/A
Luminaire Lumens: 10124.0 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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					20					
RC	80					70					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°	11782	11782	11782
5°	11813	11763	11663
10°	11688	11656	11523
15°	11481	11481	11350
20°	11238	11252	11108
25°	10867	11002	10828
30°	10233	10694	10563
35°	9670	10250	10267
40°	9200	9696	9950
45°	8674	9109	9576
50°	8119	8584	9168
55°	7489	7986	8673
60°	6744	7287	8066
65°	5955	6479	7337
70°	4963	5519	6233
75°	3900	4407	4879
80°	2789	3102	3440
85°	1819	1819	1714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.2	4.1
10°-20°	1158.1	11.4
20°-30°	1692.3	16.7
30°-40°	1921.0	19.0
40°-50°	1854.4	18.3
50°-60°	1529.8	15.1
60°-70°	1018.7	10.1
70°-80°	455.9	4.5
80°-90°	81.5	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°	3262.7	32.2
0°-40°	5183.7	51.2
0°-60°	8567.9	84.6
0°-90°	10124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4378	4378	4378	4378	4378	
5°	4373	4372	4355	4331	4318	414
15°	4121	4131	4121	4102	4074	1162
25°	3660	3689	3706	3679	3647	1676
35°	2944	2984	3120	3137	3125	1844
45°	2279	2318	2394	2503	2516	1759
55°	1596	1623	1702	1796	1849	1425
65°	935	960	1018	1090	1152	927
75°	375	395	424	444	469	410
85°	59	59	59	56	56	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4378.4	4378.4	4378.4	4378.4	4378.4
2.5°	4390.1	4391.8	4381.7	4354.8	4338.0
5°	4373.3	4371.6	4354.8	4331.3	4317.8
7.5°	4324.5	4327.9	4322.9	4289.2	4270.7
10°	4277.4	4279.1	4265.7	4238.8	4216.9
12.5°	4216.9	4215.2	4196.7	4183.3	4147.9
15°	4121.0	4131.1	4121.0	4102.5	4073.9
17.5°	4028.5	4028.5	4035.2	4003.3	3981.4
20°	3924.2	3929.3	3929.3	3904.0	3878.8
22.5°	3803.1	3818.2	3823.3	3796.4	3766.1
25°	3660.1	3688.7	3705.5	3678.6	3646.7
27.5°	3486.9	3530.6	3581.1	3560.9	3525.6
30°	3293.4	3357.4	3441.5	3424.6	3399.4
32.5°	3110.1	3174.0	3290.1	3283.4	3269.9
35°	2943.6	2984.0	3120.2	3137.0	3125.2
37.5°	2785.5	2822.5	2950.3	2989.0	2978.9
40°	2618.9	2659.3	2760.2	2829.2	2832.6
42.5°	2454.1	2492.8	2575.2	2674.5	2674.5
45°	2279.2	2317.9	2393.6	2502.9	2516.3
47.5°	2107.6	2148.0	2222.0	2331.3	2353.2
50°	1939.4	1976.4	2050.4	2156.4	2190.0
52.5°	1764.5	1804.8	1877.2	1974.7	2023.5
55°	1596.3	1623.2	1702.2	1796.4	1848.6
57.5°	1421.3	1446.6	1535.7	1616.4	1670.3
60°	1253.1	1285.1	1354.0	1436.5	1498.7
62.5°	1091.6	1125.3	1184.2	1256.5	1327.1
65°	935.2	960.4	1017.6	1090.0	1152.2
67.5°	783.8	805.7	862.9	913.4	979.0
70°	630.8	659.4	701.4	750.2	792.2
72.5°	508.0	519.8	555.1	590.4	634.1
75°	375.1	395.3	423.9	444.1	469.3
77.5°	269.1	280.9	297.7	314.5	338.1
80°	180.0	185.0	200.2	203.5	222.0
82.5°	109.3	112.7	116.1	117.7	124.5
85°	58.9	58.9	58.9	55.5	55.5
87.5°	33.6	33.6	28.6	23.5	16.8
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)