

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: P558241

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-84-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: P558241
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-30-UNV-93-84-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

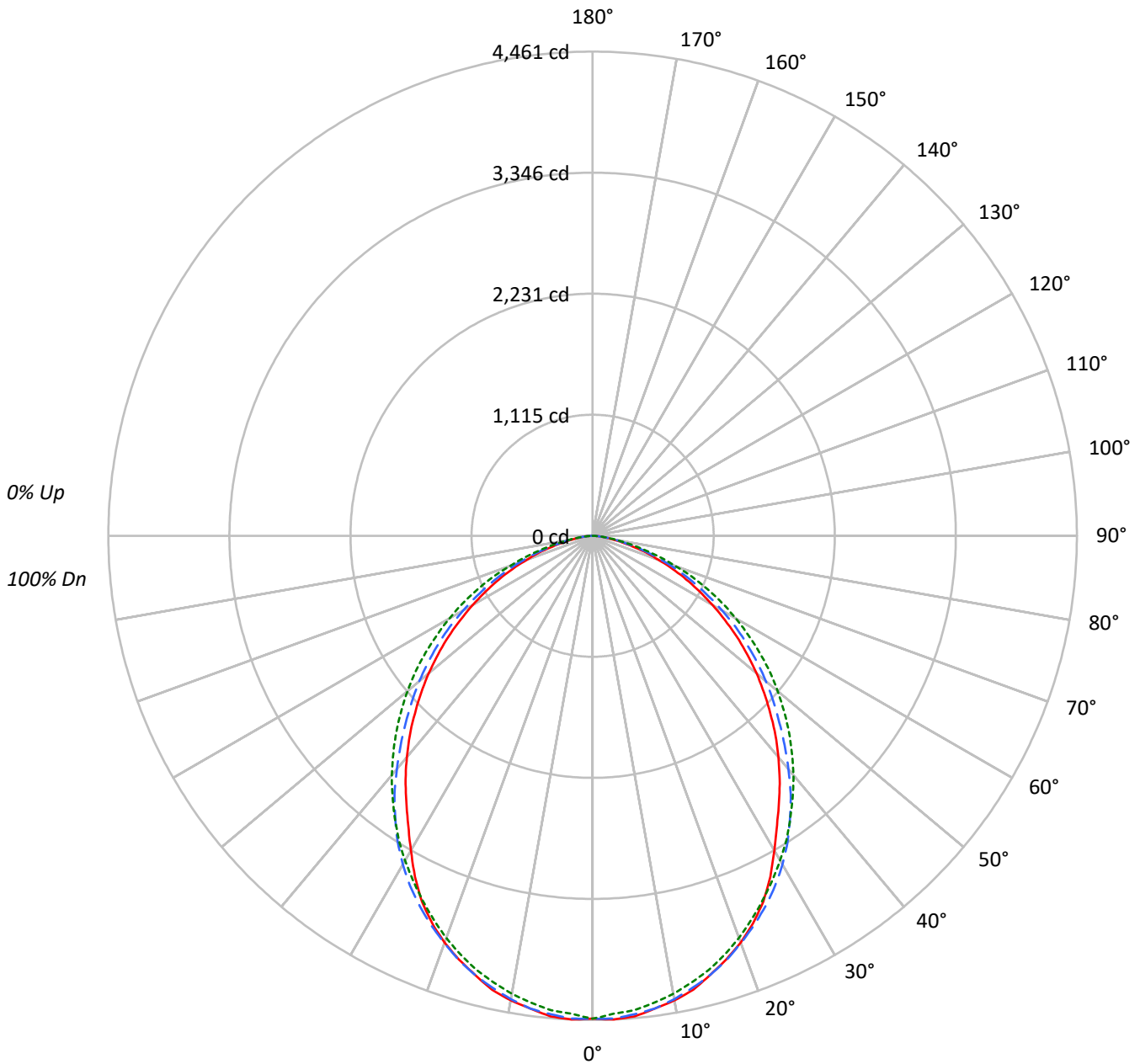
Lumens per Lamp: N/A
Luminaire Lumens: 10288.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	11973	11973	11973
5°	12005	11954	11853
10°	11877	11845	11709
15°	11667	11667	11533
20°	11420	11434	11287
25°	11044	11181	11003
30°	10399	10867	10734
35°	9827	10416	10433
40°	9349	9853	10112
45°	8814	9256	9731
50°	8251	8723	9317
55°	7610	8115	8813
60°	6853	7406	8197
65°	6052	6585	7456
70°	5043	5608	6334
75°	3963	4478	4958
80°	2834	3152	3496
85°	1846	1846	1741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.9	4.1
10°-20°	1176.8	11.4
20°-30°	1719.8	16.7
30°-40°	1952.1	19.0
40°-50°	1884.5	18.3
50°-60°	1554.6	15.1
60°-70°	1035.2	10.1
70°-80°	463.2	4.5
80°-90°	82.9	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°	3315.5	32.2
0°-40°	5267.6	51.2
0°-60°	8706.7	84.6
0°-90°	10288.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4449	4449	4449	4449	4449	
5°	4444	4442	4425	4401	4388	421
15°	4188	4198	4188	4169	4140	1181
25°	3719	3748	3766	3738	3706	1703
35°	2991	3032	3171	3188	3176	1874
45°	2316	2355	2432	2543	2557	1787
55°	1622	1650	1730	1826	1878	1448
65°	950	976	1034	1108	1171	942
75°	381	402	431	451	477	417
85°	60	60	60	56	56	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4449.3	4449.3	4449.3	4449.3	4449.3
2.5°	4461.3	4463.0	4452.7	4425.4	4408.3
5°	4444.2	4442.5	4425.4	4401.4	4387.8
7.5°	4394.6	4398.0	4392.9	4358.7	4339.9
10°	4346.7	4348.4	4334.8	4307.4	4285.2
12.5°	4285.2	4283.5	4264.7	4251.0	4215.1
15°	4187.8	4198.0	4187.8	4169.0	4139.9
17.5°	4093.8	4093.8	4100.6	4068.1	4045.9
20°	3987.8	3992.9	3992.9	3967.3	3941.6
22.5°	3864.7	3880.1	3885.2	3857.9	3827.1
25°	3719.4	3748.5	3765.6	3738.2	3705.8
27.5°	3543.4	3587.8	3639.1	3618.6	3582.7
30°	3346.8	3411.8	3497.2	3480.1	3454.5
32.5°	3160.5	3225.4	3343.4	3336.5	3322.9
35°	2991.3	3032.3	3170.7	3187.8	3175.9
37.5°	2830.6	2868.2	2998.1	3037.4	3027.2
40°	2661.4	2702.4	2805.0	2875.0	2878.5
42.5°	2493.9	2533.2	2616.9	2717.8	2717.8
45°	2316.1	2355.4	2432.3	2543.4	2557.1
47.5°	2141.7	2182.8	2258.0	2369.1	2391.3
50°	1970.8	2008.4	2083.6	2191.3	2225.5
52.5°	1793.1	1834.1	1907.6	2006.7	2056.3
55°	1622.1	1649.5	1729.8	1825.5	1878.5
57.5°	1444.4	1470.0	1560.6	1642.6	1697.3
60°	1273.4	1305.9	1376.0	1459.7	1523.0
62.5°	1109.3	1143.5	1203.3	1276.8	1348.6
65°	950.4	976.0	1034.1	1107.6	1170.9
67.5°	796.5	818.8	876.9	928.1	994.8
70°	641.0	670.0	712.8	762.3	805.1
72.5°	516.2	528.2	564.1	600.0	644.4
75°	381.2	401.7	430.7	451.3	476.9
77.5°	273.5	285.5	302.5	319.6	343.6
80°	182.9	188.0	203.4	206.8	225.6
82.5°	111.1	114.5	117.9	119.7	126.5
85°	59.8	59.8	59.8	56.4	56.4
87.5°	34.2	34.2	29.1	23.9	17.1
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)