

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: P556712

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-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: P556712
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-LD4-1STD-30-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 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

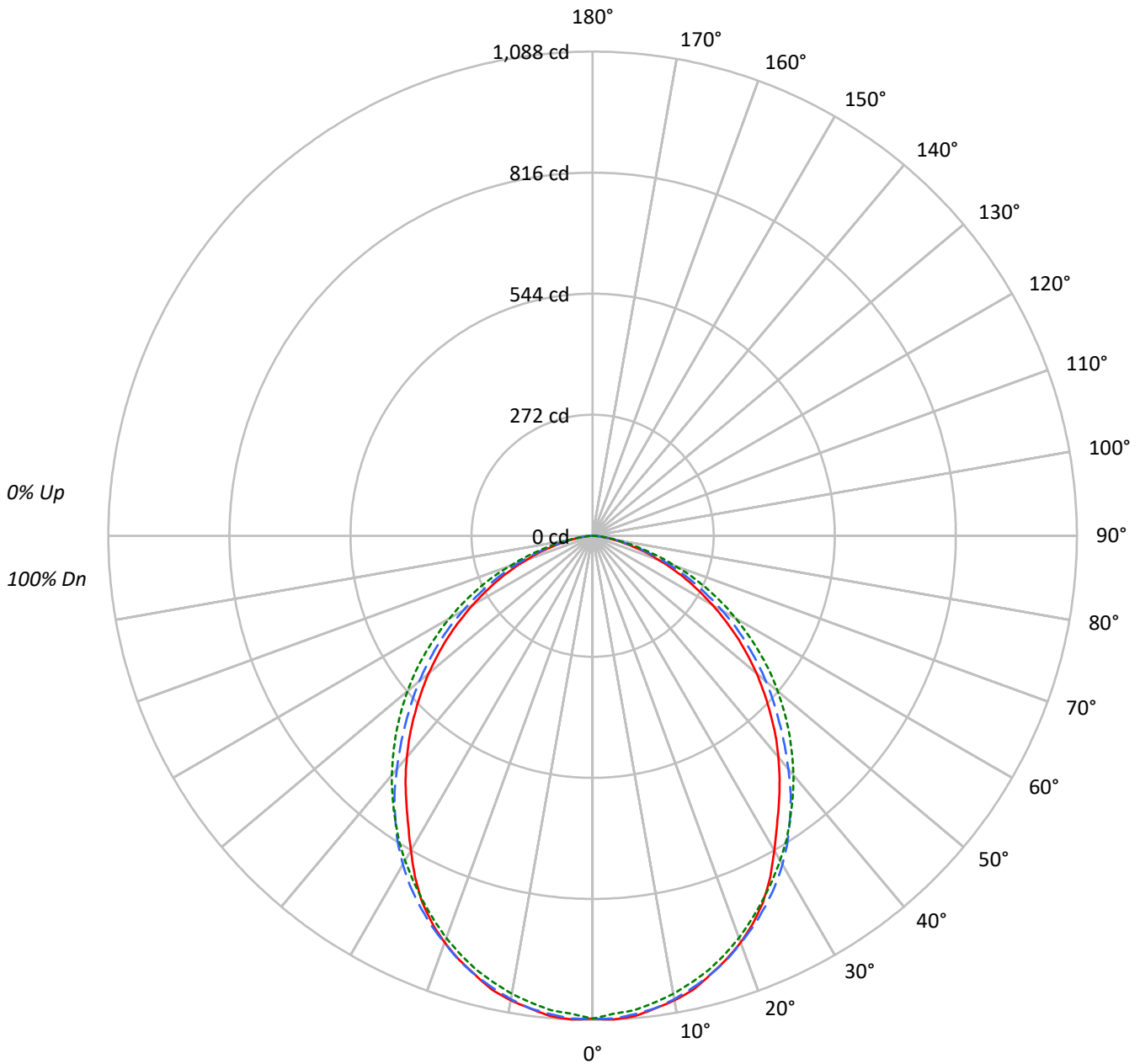
Lumens per Lamp: N/A
Luminaire Lumens: 2509.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	2920	2920	2920
5°	2928	2915	2891
10°	2897	2889	2856
15°	2845	2845	2813
20°	2785	2789	2753
25°	2693	2727	2683
30°	2536	2650	2618
35°	2396	2540	2544
40°	2280	2403	2466
45°	2149	2257	2373
50°	2012	2127	2272
55°	1856	1979	2149
60°	1672	1806	1999
65°	1476	1606	1818
70°	1230	1367	1544
75°	967	1092	1209
80°	691	769	852
85°	451	451	426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	4.1
10°-20°	287.0	11.4
20°-30°	419.4	16.7
30°-40°	476.1	19.0
40°-50°	459.6	18.3
50°-60°	379.1	15.1
60°-70°	252.5	10.1
70°-80°	113.0	4.5
80°-90°	20.2	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°	808.6	32.2
0°-40°	1284.7	51.2
0°-60°	2123.4	84.6
0°-90°	2509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2509.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1084	1083	1079	1073	1070	103
15°	1021	1024	1021	1017	1010	288
25°	907	914	918	912	904	415
35°	730	740	773	777	774	457
45°	565	574	593	620	624	436
55°	396	402	422	445	458	353
65°	232	238	252	270	286	230
75°	93	98	105	110	116	102
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.1	1085.1	1085.1	1085.1	1085.1
2.5°	1088.0	1088.4	1085.9	1079.2	1075.1
5°	1083.8	1083.4	1079.2	1073.4	1070.1
7.5°	1071.7	1072.6	1071.3	1063.0	1058.4
10°	1060.1	1060.5	1057.1	1050.5	1045.1
12.5°	1045.1	1044.6	1040.1	1036.7	1028.0
15°	1021.3	1023.8	1021.3	1016.7	1009.6
17.5°	998.4	998.4	1000.0	992.1	986.7
20°	972.5	973.8	973.8	967.5	961.3
22.5°	942.5	946.3	947.5	940.8	933.3
25°	907.1	914.2	918.3	911.7	903.7
27.5°	864.1	875.0	887.5	882.5	873.7
30°	816.2	832.0	852.9	848.7	842.5
32.5°	770.8	786.6	815.4	813.7	810.4
35°	729.5	739.5	773.3	777.4	774.5
37.5°	690.3	699.5	731.2	740.8	738.3
40°	649.0	659.1	684.1	701.2	702.0
42.5°	608.2	617.8	638.2	662.8	662.8
45°	564.8	574.4	593.2	620.3	623.6
47.5°	522.3	532.3	550.7	577.8	583.2
50°	480.6	489.8	508.1	534.4	542.7
52.5°	437.3	447.3	465.2	489.4	501.5
55°	395.6	402.3	421.9	445.2	458.1
57.5°	352.2	358.5	380.6	400.6	413.9
60°	310.6	318.5	335.6	356.0	371.4
62.5°	270.5	278.9	293.5	311.4	328.9
65°	231.8	238.0	252.2	270.1	285.5
67.5°	194.3	199.7	213.8	226.4	242.6
70°	156.3	163.4	173.8	185.9	196.3
72.5°	125.9	128.8	137.6	146.3	157.2
75°	93.0	98.0	105.0	110.1	116.3
77.5°	66.7	69.6	73.8	78.0	83.8
80°	44.6	45.9	49.6	50.4	55.0
82.5°	27.1	27.9	28.8	29.2	30.8
85°	14.6	14.6	14.6	13.8	13.8
87.5°	8.3	8.3	7.1	5.8	4.2
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)