

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: P558404

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-86-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: P558404
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-50-UNV-81-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

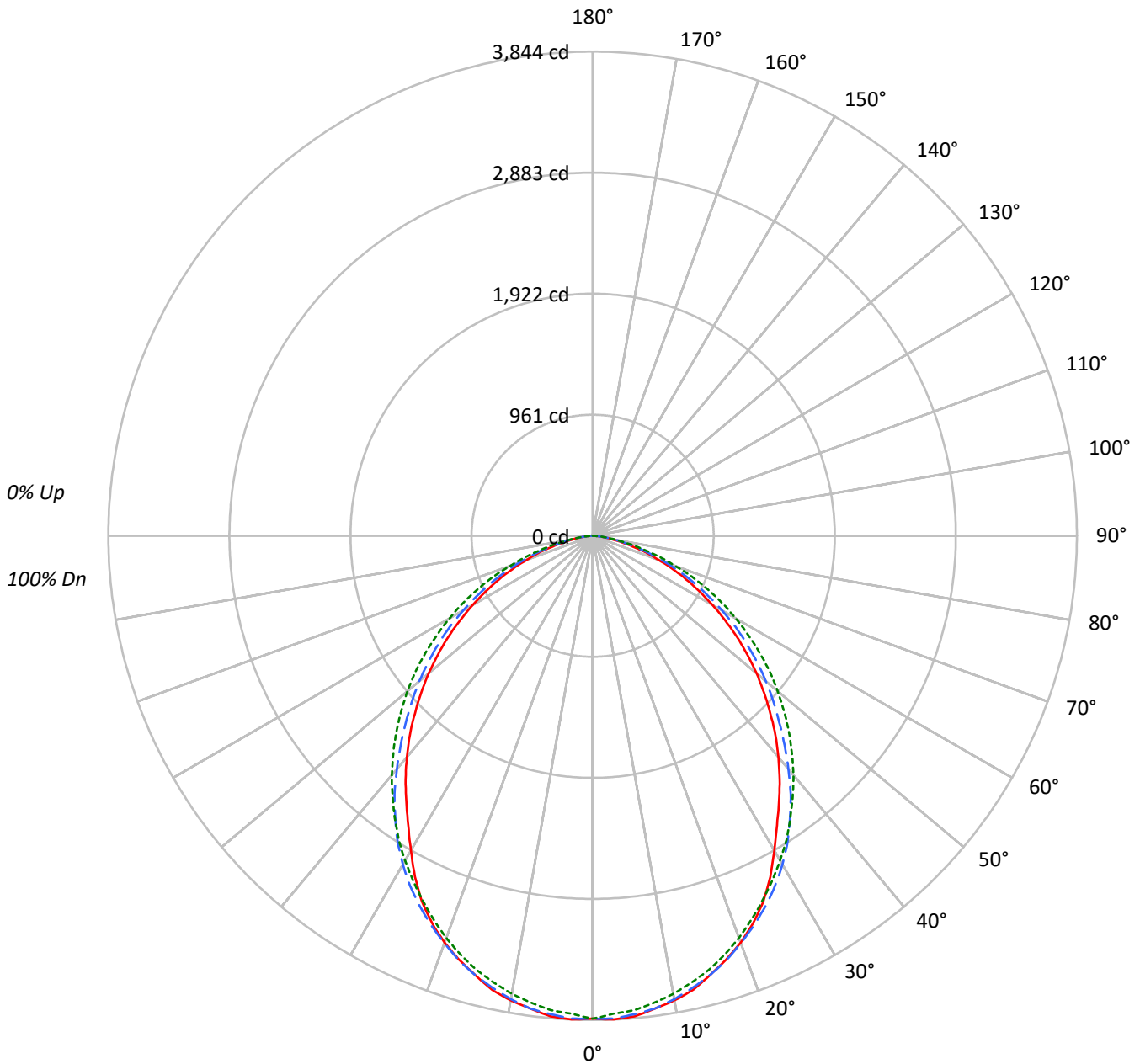
Lumens per Lamp: N/A
Luminaire Lumens: 8865.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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°	10317	10317	10317
5°	10344	10301	10213
10°	10235	10206	10090
15°	10053	10053	9938
20°	9840	9853	9726
25°	9516	9634	9481
30°	8961	9364	9249
35°	8467	8975	8990
40°	8056	8490	8713
45°	7595	7976	8385
50°	7109	7516	8028
55°	6558	6993	7594
60°	5906	6381	7063
65°	5214	5674	6424
70°	4345	4832	5458
75°	3415	3859	4272
80°	2442	2717	3013
85°	1593	1593	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.0	4.1
10°-20°	1014.1	11.4
20°-30°	1481.9	16.7
30°-40°	1682.1	19.0
40°-50°	1623.8	18.3
50°-60°	1339.5	15.1
60°-70°	892.0	10.1
70°-80°	399.2	4.5
80°-90°	71.4	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°	2856.9	32.2
0°-40°	4539.0	51.2
0°-60°	7502.4	84.6
0°-90°	8865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3834	3834	3834	3834	3834	
5°	3830	3828	3813	3793	3781	362
15°	3608	3617	3608	3592	3567	1017
25°	3205	3230	3245	3221	3193	1468
35°	2578	2613	2732	2747	2737	1615
45°	1996	2030	2096	2192	2203	1540
55°	1398	1421	1490	1573	1619	1248
65°	819	841	891	954	1009	812
75°	328	346	371	389	411	359
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3833.9	<i>3833.9</i>	3833.9	3833.9	3833.9
2.5°	<i>3844.2</i>	<i>3845.7</i>	<i>3836.8</i>	<i>3813.3</i>	<i>3798.5</i>
5°	3829.5	<i>3828.0</i>	3813.3	3792.6	3780.9
7.5°	3786.8	<i>3789.7</i>	3785.3	3755.8	3739.6
10°	3745.5	<i>3747.0</i>	3735.2	3711.6	3692.5
12.5°	3692.5	<i>3691.0</i>	3674.8	3663.0	3632.1
15°	3608.5	<i>3617.4</i>	3608.5	3592.3	3567.3
17.5°	3527.5	<i>3527.5</i>	3533.4	3505.4	3486.3
20°	3436.2	<i>3440.6</i>	3440.6	3418.5	3396.4
22.5°	3330.2	<i>3343.4</i>	3347.8	3324.3	3297.8
25°	3205.0	<i>3230.0</i>	3244.7	3221.2	3193.2
27.5°	3053.3	<i>3091.6</i>	3135.7	3118.1	3087.1
30°	2883.9	<i>2939.9</i>	3013.5	2998.8	2976.7
32.5°	2723.3	<i>2779.3</i>	2880.9	2875.0	2863.3
35°	2577.5	<i>2612.9</i>	2732.2	2746.9	2736.6
37.5°	2439.1	<i>2471.5</i>	2583.4	2617.3	2608.5
40°	2293.3	<i>2328.6</i>	2417.0	2477.4	2480.3
42.5°	2148.9	<i>2182.8</i>	2255.0	2341.9	2341.9
45°	1995.7	<i>2029.6</i>	2095.9	2191.6	2203.4
47.5°	1845.5	<i>1880.9</i>	1945.7	2041.4	2060.5
50°	1698.2	<i>1730.6</i>	1795.4	1888.2	1917.7
52.5°	1545.0	<i>1580.4</i>	1643.7	1729.2	1771.9
55°	1397.8	<i>1421.3</i>	1490.5	1573.0	1618.7
57.5°	1244.6	<i>1266.7</i>	1344.7	1415.4	1462.6
60°	1097.3	<i>1125.3</i>	1185.7	1257.8	1312.3
62.5°	955.9	<i>985.4</i>	1036.9	1100.2	1162.1
65°	818.9	<i>841.0</i>	891.1	954.4	1008.9
67.5°	686.4	<i>705.5</i>	755.6	799.8	857.2
70°	552.3	<i>577.4</i>	614.2	656.9	693.7
72.5°	444.8	<i>455.1</i>	486.0	517.0	555.3
75°	328.5	<i>346.1</i>	371.2	388.8	410.9
77.5°	235.7	<i>246.0</i>	260.7	275.4	296.0
80°	157.6	<i>162.0</i>	175.3	178.2	194.4
82.5°	95.7	<i>98.7</i>	101.6	103.1	109.0
85°	51.6	<i>51.6</i>	51.6	48.6	48.6
87.5°	29.5	<i>29.5</i>	25.0	20.6	14.7
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)