

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: P557860

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-93-86-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: P557860
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-LD4-3HI-40-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

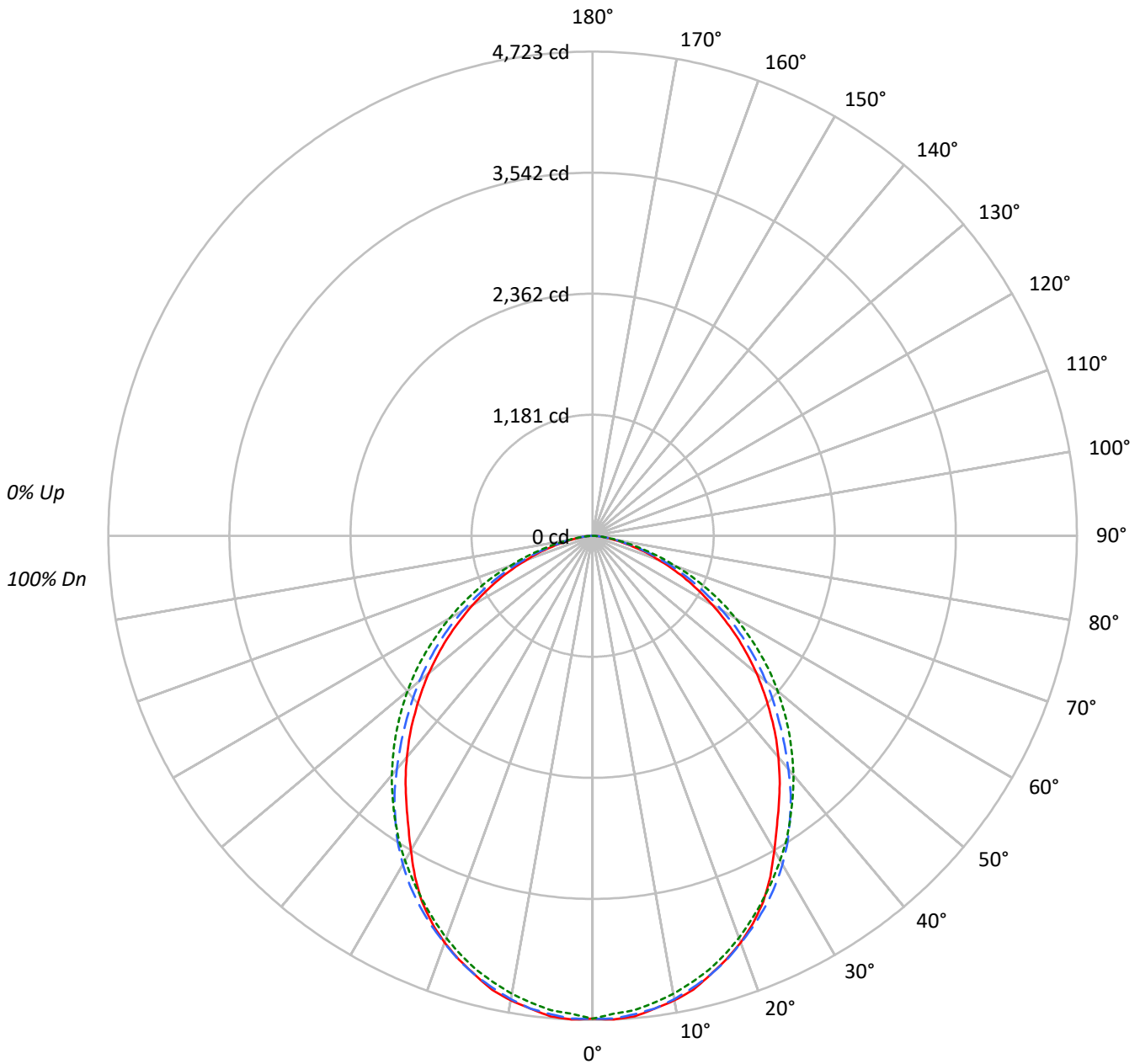
Lumens per Lamp: N/A
Luminaire Lumens: 10892.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	12676	12676	12676
5°	12710	12656	12548
10°	12575	12540	12397
15°	12352	12352	12211
20°	12090	12106	11950
25°	11692	11837	11649
30°	11010	11505	11364
35°	10404	11028	11045
40°	9898	10432	10705
45°	9332	9800	10303
50°	8735	9235	9864
55°	8057	8592	9331
60°	7256	7840	8678
65°	6407	6971	7893
70°	5339	5937	6706
75°	4196	4741	5250
80°	3000	3336	3702
85°	1954	1954	1843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.5	4.1
10°-20°	1245.9	11.4
20°-30°	1820.7	16.7
30°-40°	2066.7	19.0
40°-50°	1995.1	18.3
50°-60°	1645.8	15.1
60°-70°	1096.0	10.1
70°-80°	490.4	4.5
80°-90°	87.7	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°	3510.2	32.2
0°-40°	5576.9	51.2
0°-60°	9217.8	84.6
0°-90°	10892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4710	4710	4710	4710	4710	
5°	4705	4703	4685	4660	4645	445
15°	4434	4444	4434	4414	4383	1250
25°	3938	3969	3987	3958	3923	1803
35°	3167	3210	3357	3375	3362	1984
45°	2452	2494	2575	2693	2707	1892
55°	1717	1746	1831	1933	1989	1533
65°	1006	1033	1095	1173	1240	998
75°	404	425	456	478	505	441
85°	63	63	63	60	60	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4710.5	4710.5	4710.5	4710.5	4710.5
2.5°	4723.2	4725.0	4714.1	4685.2	4667.1
5°	4705.1	4703.3	4685.2	4659.8	4645.4
7.5°	4652.6	4656.2	4650.8	4614.6	4594.7
10°	4601.9	4603.7	4589.3	4560.3	4536.8
12.5°	4536.8	4535.0	4515.1	4500.6	4462.6
15°	4433.6	4444.5	4433.6	4413.7	4383.0
17.5°	4334.1	4334.1	4341.3	4307.0	4283.4
20°	4221.9	4227.3	4227.3	4200.2	4173.0
22.5°	4091.6	4107.9	4113.3	4084.4	4051.8
25°	3937.8	3968.6	3986.7	3957.7	3923.3
27.5°	3751.4	3798.4	3852.7	3831.0	3793.0
30°	3543.3	3612.1	3702.5	3684.4	3657.3
32.5°	3346.0	3414.8	3539.7	3532.4	3518.0
35°	3166.9	3210.3	3356.9	3375.0	3362.3
37.5°	2996.8	3036.6	3174.1	3215.7	3204.9
40°	2817.6	2861.1	2969.6	3043.8	3047.4
42.5°	2640.3	2681.9	2770.6	2877.3	2877.3
45°	2452.1	2493.7	2575.1	2692.8	2707.2
47.5°	2267.5	2310.9	2390.5	2508.2	2531.7
50°	2086.5	2126.3	2206.0	2320.0	2356.2
52.5°	1898.3	1941.8	2019.6	2124.5	2177.0
55°	1717.4	1746.3	1831.4	1932.7	1988.8
57.5°	1529.2	1556.3	1652.2	1739.1	1797.0
60°	1348.2	1382.6	1456.8	1545.4	1612.4
62.5°	1174.5	1210.7	1274.0	1351.8	1427.8
65°	1006.2	1033.3	1094.8	1172.7	1239.6
67.5°	843.3	866.8	928.3	982.6	1053.2
70°	678.6	709.4	754.6	807.1	852.3
72.5°	546.5	559.2	597.2	635.2	682.2
75°	403.6	425.3	456.0	477.7	504.9
77.5°	289.5	302.2	320.3	338.4	363.7
80°	193.6	199.1	215.3	219.0	238.9
82.5°	117.6	121.2	124.9	126.7	133.9
85°	63.3	63.3	63.3	59.7	59.7
87.5°	36.2	36.2	30.8	25.3	18.1
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)