

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: P558437

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-86-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: P558437
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-93-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

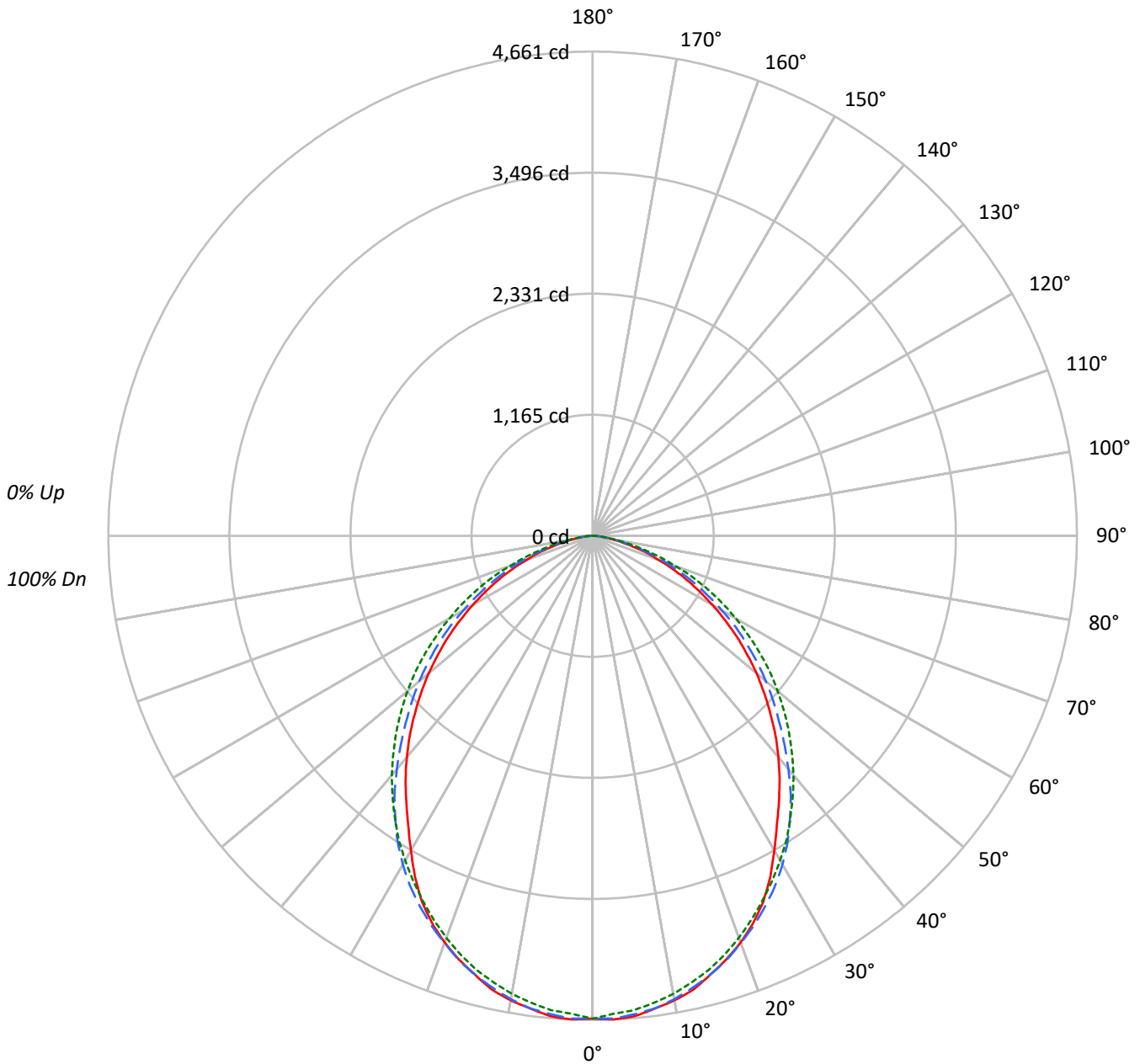
Lumens per Lamp: N/A
Luminaire Lumens: 10748.0 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	12508	12508	12508
5°	12542	12488	12382
10°	12409	12374	12233
15°	12188	12188	12049
20°	11930	11946	11792
25°	11537	11680	11495
30°	10864	11353	11214
35°	10266	10882	10900
40°	9767	10294	10564
45°	9208	9670	10166
50°	8619	9113	9733
55°	7950	8478	9207
60°	7160	7737	8563
65°	6322	6879	7789
70°	5268	5858	6618
75°	4140	4679	5180
80°	2961	3293	3653
85°	1930	1930	1819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.6	4.1
10°-20°	1229.5	11.4
20°-30°	1796.7	16.7
30°-40°	2039.4	19.0
40°-50°	1968.7	18.3
50°-60°	1624.1	15.1
60°-70°	1081.5	10.1
70°-80°	483.9	4.5
80°-90°	86.6	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°	3463.8	32.2
0°-40°	5503.2	51.2
0°-60°	9096.0	84.6
0°-90°	10748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10748.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4648	4648	4648	4648	4648	
5°	4643	4641	4623	4598	4584	439
15°	4375	4386	4375	4355	4325	1233
25°	3886	3916	3934	3905	3871	1779
35°	3125	3168	3312	3330	3318	1958
45°	2420	2461	2541	2657	2671	1867
55°	1695	1723	1807	1907	1962	1513
65°	993	1020	1080	1157	1223	984
75°	398	420	450	471	498	435
85°	62	62	62	59	59	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4648.2	4648.2	4648.2	4648.2	4648.2
2.5°	4660.7	4662.5	4651.8	4623.2	4605.4
5°	4642.9	4641.1	4623.2	4598.2	4583.9
7.5°	4591.1	4594.7	4589.3	4553.6	4533.9
10°	4541.1	4542.9	4528.6	4500.0	4476.8
12.5°	4476.8	4475.0	4455.4	4441.1	4403.6
15°	4375.0	4385.7	4375.0	4355.4	4325.0
17.5°	4276.8	4276.8	4283.9	4250.0	4226.8
20°	4166.1	4171.4	4171.4	4144.7	4117.9
22.5°	4037.5	4053.6	4058.9	4030.4	3998.2
25°	3885.7	3916.1	3933.9	3905.4	3871.4
27.5°	3701.8	3748.2	3801.8	3780.4	3742.9
30°	3496.4	3564.3	3653.6	3635.7	3608.9
32.5°	3301.8	3369.7	3492.9	3485.7	3471.4
35°	3125.0	3167.9	3312.5	3330.4	3317.9
37.5°	2957.2	2996.4	3132.2	3173.2	3162.5
40°	2780.4	2823.2	2930.4	3003.6	3007.2
42.5°	2605.4	2646.4	2733.9	2839.3	2839.3
45°	2419.7	2460.7	2541.1	2657.2	2671.4
47.5°	2237.5	2280.4	2358.9	2475.0	2498.2
50°	2058.9	2098.2	2176.8	2289.3	2325.0
52.5°	1873.2	1916.1	1992.9	2096.4	2148.2
55°	1694.6	1723.2	1807.1	1907.2	1962.5
57.5°	1508.9	1535.7	1630.4	1716.1	1773.2
60°	1330.4	1364.3	1437.5	1525.0	1591.1
62.5°	1158.9	1194.6	1257.1	1333.9	1408.9
65°	992.9	1019.6	1080.4	1157.1	1223.2
67.5°	832.1	855.4	916.1	969.6	1039.3
70°	669.6	700.0	744.6	796.4	841.1
72.5°	539.3	551.8	589.3	626.8	673.2
75°	398.2	419.6	450.0	471.4	498.2
77.5°	285.7	298.2	316.1	333.9	358.9
80°	191.1	196.4	212.5	216.1	235.7
82.5°	116.1	119.6	123.2	125.0	132.1
85°	62.5	62.5	62.5	58.9	58.9
87.5°	35.7	35.7	30.4	25.0	17.9
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)