

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: P557158

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-93-87-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: P557158
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-LD4-2HI-50-UNV-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

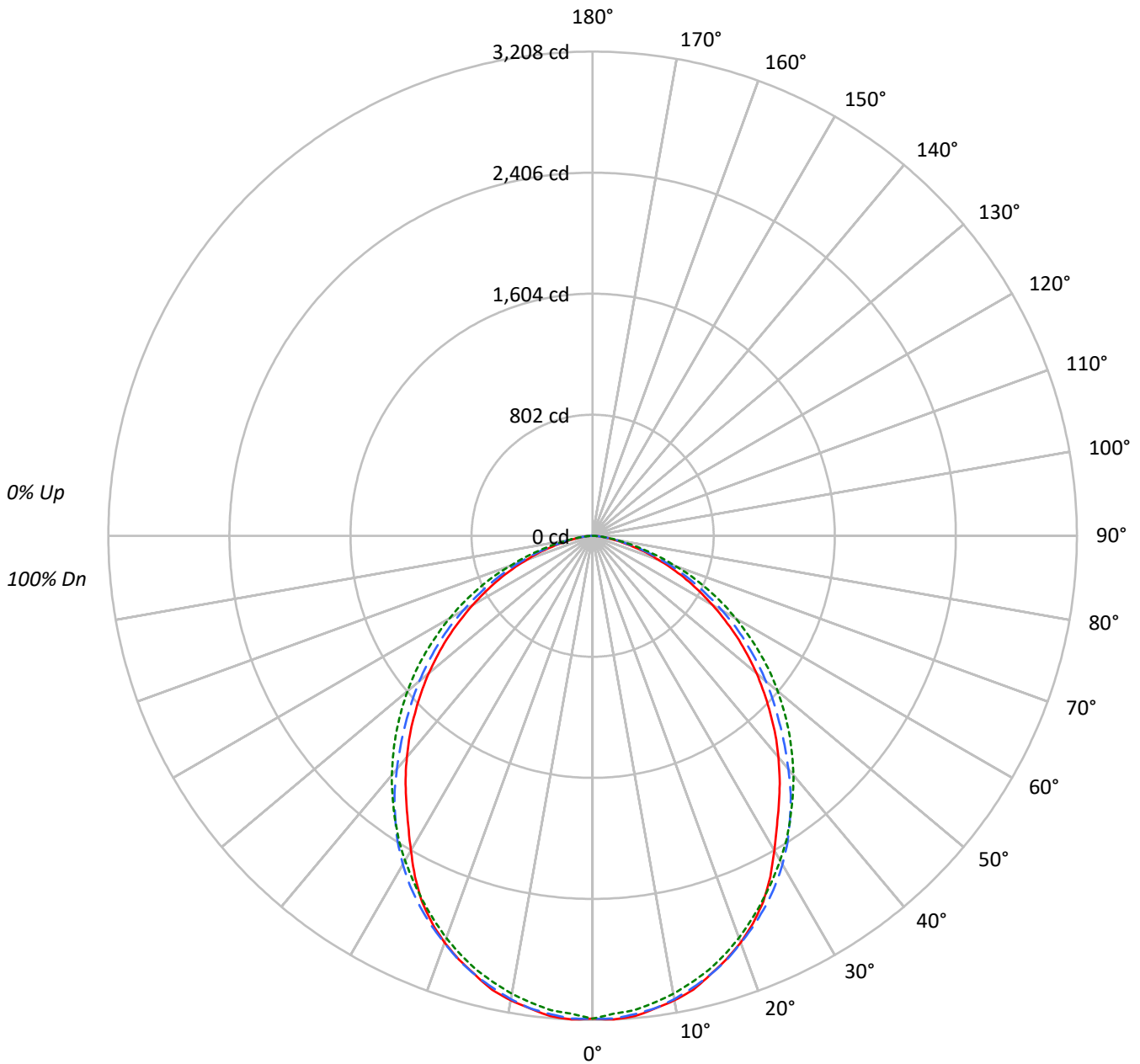
Lumens per Lamp: N/A
Luminaire Lumens: 7398.0 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8610	8610	8610
5°	8633	8596	8523
10°	8541	8517	8420
15°	8389	8389	8294
20°	8212	8222	8117
25°	7941	8040	7912
30°	7478	7814	7719
35°	7066	7490	7502
40°	6723	7085	7271
45°	6338	6656	6998
50°	5933	6273	6700
55°	5473	5836	6337
60°	4928	5325	5894
65°	4351	4735	5361
70°	3626	4033	4555
75°	2850	3220	3565
80°	2038	2267	2514
85°	1328	1328	1254



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.2	4.1
10°-20°	846.3	11.4
20°-30°	1236.7	16.7
30°-40°	1403.8	19.0
40°-50°	1355.1	18.3
50°-60°	1117.9	15.1
60°-70°	744.4	10.1
70°-80°	333.1	4.5
80°-90°	59.6	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°	2384.2	32.2
0°-40°	3787.9	51.2
0°-60°	6260.9	84.6
0°-90°	7398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3199	3199	3199	3199	3199	
5°	3196	3194	3182	3165	3155	302
15°	3011	3019	3011	2998	2977	849
25°	2675	2696	2708	2688	2665	1225
35°	2151	2180	2280	2292	2284	1348
45°	1666	1694	1749	1829	1839	1285
55°	1166	1186	1244	1313	1351	1041
65°	683	702	744	796	842	678
75°	274	289	310	324	343	300
85°	43	43	43	41	41	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3199.4	3199.4	3199.4	3199.4	3199.4
2.5°	3208.0	3209.3	3201.9	3182.2	3169.9
5°	3195.8	3194.5	3182.2	3165.0	3155.2
7.5°	3160.1	3162.6	3158.9	3134.3	3120.8
10°	3125.7	3126.9	3117.1	3097.4	3081.4
12.5°	3081.4	3080.2	3066.7	3056.9	3031.1
15°	3011.4	3018.8	3011.4	2997.9	2977.0
17.5°	2943.8	2943.8	2948.7	2925.3	2909.4
20°	2867.6	2871.3	2871.3	2852.8	2834.4
22.5°	2779.1	2790.1	2793.8	2774.2	2752.0
25°	2674.6	2695.5	2707.8	2688.1	2664.8
27.5°	2548.0	2580.0	2616.8	2602.1	2576.3
30°	2406.7	2453.4	2514.8	2502.5	2484.1
32.5°	2272.7	2319.4	2404.2	2399.3	2389.4
35°	2151.0	2180.5	2280.0	2292.3	2283.7
37.5°	2035.5	2062.5	2155.9	2184.2	2176.8
40°	1913.8	1943.3	2017.0	2067.4	2069.9
42.5°	1793.3	1821.6	1881.8	1954.3	1954.3
45°	1665.5	1693.8	1749.1	1829.0	1838.8
47.5°	1540.1	1569.6	1623.7	1703.6	1719.6
50°	1417.2	1444.2	1498.3	1575.8	1600.3
52.5°	1289.4	1318.9	1371.7	1443.0	1478.7
55°	1166.5	1186.1	1243.9	1312.7	1350.8
57.5°	1038.6	1057.1	1122.2	1181.2	1220.5
60°	915.7	939.1	989.5	1049.7	1095.2
62.5°	797.7	822.3	865.3	918.2	969.8
65°	683.4	701.8	743.6	796.5	842.0
67.5°	572.8	588.8	630.5	667.4	715.4
70°	460.9	481.8	512.6	548.2	578.9
72.5°	371.2	379.8	405.6	431.4	463.4
75°	274.1	288.8	309.7	324.5	342.9
77.5°	196.7	205.3	217.6	229.8	247.1
80°	131.5	135.2	146.3	148.7	162.2
82.5°	79.9	82.4	84.8	86.0	91.0
85°	43.0	43.0	43.0	40.6	40.6
87.5°	24.6	24.6	20.9	17.2	12.3
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)