

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: P558093

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-96-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: P558093
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-LD4-3LO-40-UNV-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

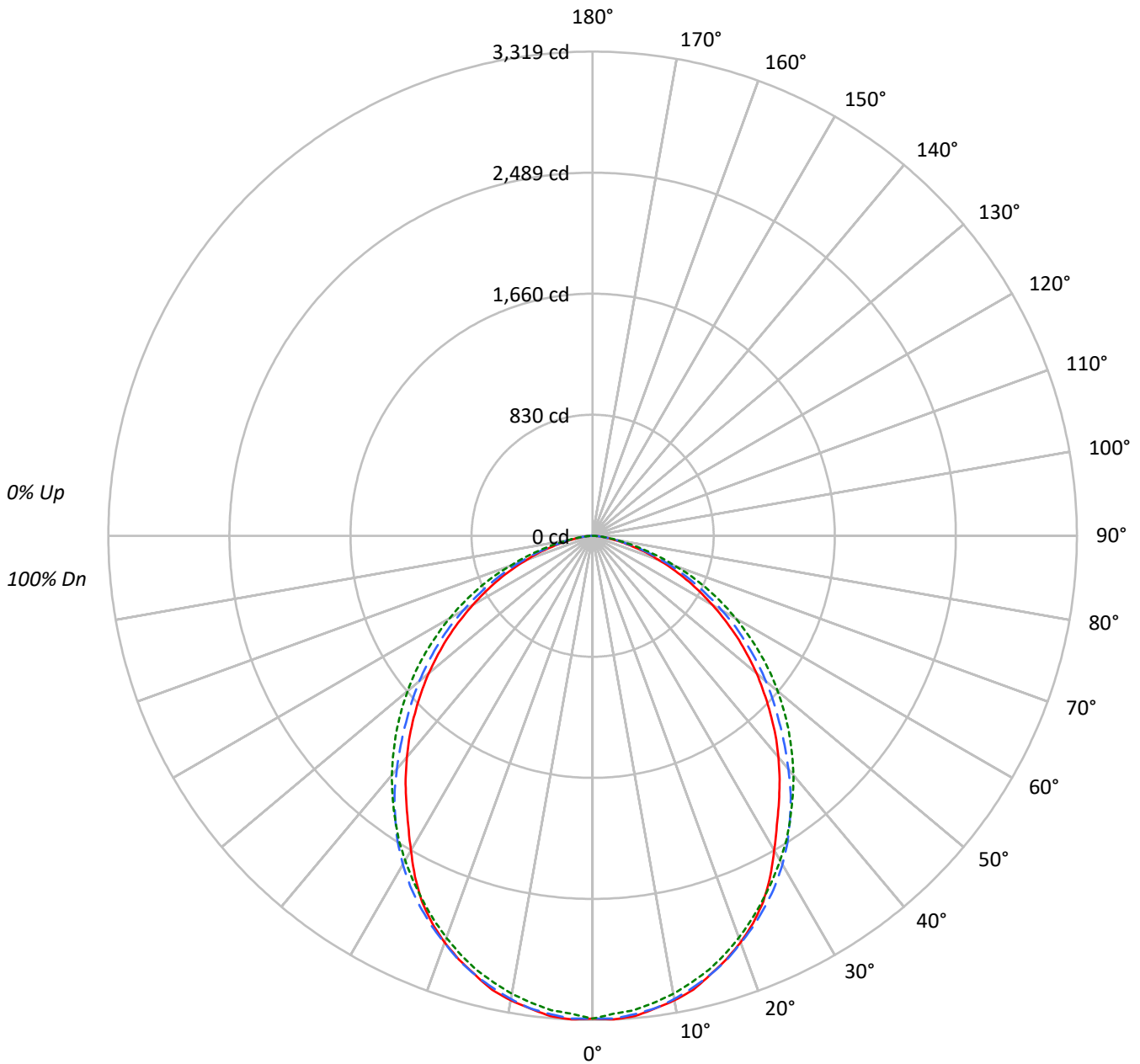
Lumens per Lamp: N/A
Luminaire Lumens: 7653.0 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	8906	8906	8906
5°	8930	8892	8817
10°	8835	8811	8710
15°	8679	8679	8579
20°	8495	8506	8397
25°	8215	8317	8185
30°	7736	8084	7985
35°	7310	7748	7761
40°	6954	7330	7522
45°	6557	6886	7239
50°	6137	6489	6931
55°	5661	6037	6556
60°	5098	5509	6097
65°	4502	4898	5546
70°	3751	4172	4712
75°	2948	3331	3688
80°	2109	2345	2600
85°	1374	1374	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.6	4.1
10°-20°	875.4	11.4
20°-30°	1279.3	16.7
30°-40°	1452.1	19.0
40°-50°	1401.8	18.3
50°-60°	1156.4	15.1
60°-70°	770.1	10.1
70°-80°	344.6	4.5
80°-90°	61.6	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°	2466.3	32.2
0°-40°	3918.5	51.2
0°-60°	6476.7	84.6
0°-90°	7653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7653.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3310	3310	3310	3310	3310	
5°	3306	3305	3292	3274	3264	313
15°	3115	3123	3115	3101	3080	878
25°	2767	2788	2801	2781	2757	1267
35°	2225	2256	2359	2371	2362	1394
45°	1723	1752	1809	1892	1902	1329
55°	1207	1227	1287	1358	1397	1077
65°	707	726	769	824	871	701
75°	284	299	320	336	355	310
85°	44	44	44	42	42	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3309.7	3309.7	3309.7	3309.7	3309.7
2.5°	3318.6	3319.9	3312.3	3291.9	3279.2
5°	3305.9	3304.6	3291.9	3274.1	3264.0
7.5°	3269.0	3271.6	3267.8	3242.3	3228.3
10°	3233.4	3234.7	3224.5	3204.2	3187.7
12.5°	3187.7	3186.4	3172.4	3162.2	3135.5
15°	3115.2	3122.8	3115.2	3101.2	3079.6
17.5°	3045.3	3045.3	3050.3	3026.2	3009.6
20°	2966.4	2970.2	2970.2	2951.2	2932.1
22.5°	2874.9	2886.3	2890.1	2869.8	2846.9
25°	2766.8	2788.4	2801.1	2780.8	2756.6
27.5°	2635.8	2668.9	2707.0	2691.8	2665.1
30°	2489.6	2537.9	2601.5	2588.8	2569.7
32.5°	2351.0	2399.3	2487.1	2482.0	2471.8
35°	2225.1	2255.6	2358.6	2371.4	2362.5
37.5°	2105.6	2133.6	2230.2	2259.5	2251.8
40°	1979.7	2010.2	2086.5	2138.7	2141.2
42.5°	1855.1	1884.4	1946.7	2021.7	2021.7
45°	1722.9	1752.1	1809.4	1892.0	1902.2
47.5°	1593.2	1623.7	1679.7	1762.3	1778.8
50°	1466.0	1494.0	1550.0	1630.1	1655.5
52.5°	1333.8	1364.3	1419.0	1492.7	1529.6
55°	1206.7	1227.0	1286.8	1358.0	1397.4
57.5°	1074.4	1093.5	1160.9	1221.9	1262.6
60°	947.3	971.4	1023.6	1085.9	1132.9
62.5°	825.2	850.6	895.1	949.8	1003.2
65°	707.0	726.0	769.3	823.9	871.0
67.5°	592.5	609.1	652.3	690.4	740.0
70°	476.8	498.4	530.2	567.1	598.9
72.5°	384.0	392.9	419.6	446.3	479.4
75°	283.5	298.8	320.4	335.7	354.7
77.5°	203.4	212.3	225.1	237.8	255.6
80°	136.1	139.9	151.3	153.9	167.8
82.5°	82.6	85.2	87.7	89.0	94.1
85°	44.5	44.5	44.5	42.0	42.0
87.5°	25.4	25.4	21.6	17.8	12.7
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)