

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: P558228

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-82-86-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: P558228
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-30-UNV-82-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

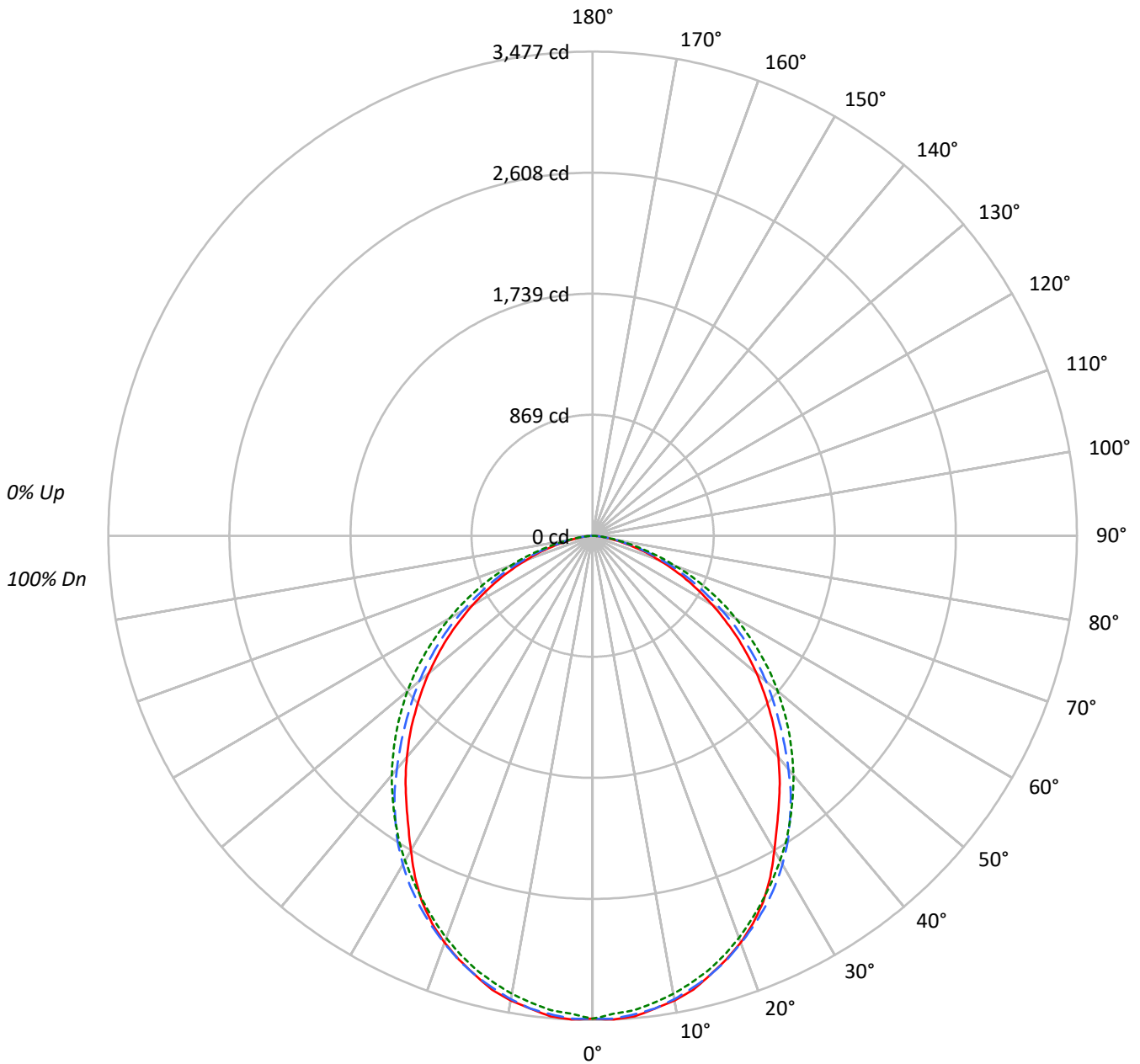
Lumens per Lamp: N/A
Luminaire Lumens: 8019.0 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9332	9332	9332
5°	9357	9318	9238
10°	9258	9232	9127
15°	9094	9094	8990
20°	8901	8913	8798
25°	8608	8715	8576
30°	8106	8470	8367
35°	7659	8119	8132
40°	7287	7680	7881
45°	6870	7215	7585
50°	6431	6799	7262
55°	5932	6326	6869
60°	5342	5772	6389
65°	4717	5132	5811
70°	3931	4371	4937
75°	3089	3490	3865
80°	2210	2456	2726
85°	1439	1439	1359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.5	4.1
10°-20°	917.3	11.4
20°-30°	1340.5	16.7
30°-40°	1521.6	19.0
40°-50°	1468.9	18.3
50°-60°	1211.7	15.1
60°-70°	806.9	10.1
70°-80°	361.1	4.5
80°-90°	64.6	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°	2584.3	32.2
0°-40°	4105.9	51.2
0°-60°	6786.4	84.6
0°-90°	8019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3468	3468	3468	3468	3468	
5°	3464	3463	3449	3431	3420	328
15°	3264	3272	3264	3250	3227	920
25°	2899	2922	2935	2914	2888	1328
35°	2332	2364	2471	2485	2475	1461
45°	1805	1836	1896	1982	1993	1393
55°	1264	1286	1348	1423	1464	1129
65°	741	761	806	863	913	735
75°	297	313	336	352	372	325
85°	47	47	47	44	44	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3468.0	3468.0	3468.0	3468.0	3468.0
2.5°	3477.3	3478.7	3470.7	3449.4	3436.0
5°	3464.0	3462.7	3449.4	3430.7	3420.0
7.5°	3425.4	3428.0	3424.0	3397.4	3382.7
10°	3388.1	3389.4	3378.7	3357.4	3340.1
12.5°	3340.1	3338.8	3324.1	3313.5	3285.5
15°	3264.2	3272.2	3264.2	3249.5	3226.9
17.5°	3190.9	3190.9	3196.2	3170.9	3153.6
20°	3108.3	3112.3	3112.3	3092.3	3072.3
22.5°	3012.4	3024.4	3028.3	3007.0	2983.0
25°	2899.1	2921.8	2935.1	2913.8	2888.5
27.5°	2761.9	2796.5	2836.5	2820.5	2792.5
30°	2608.7	2659.3	2725.9	2712.6	2692.6
32.5°	2463.4	2514.1	2606.0	2600.7	2590.0
35°	2331.5	2363.5	2471.4	2484.8	2475.4
37.5°	2206.3	2235.6	2336.9	2367.5	2359.5
40°	2074.4	2106.4	2186.3	2241.0	2243.6
42.5°	1943.8	1974.5	2039.8	2118.4	2118.4
45°	1805.3	1835.9	1895.9	1982.5	1993.1
47.5°	1669.4	1701.4	1760.0	1846.6	1863.9
50°	1536.2	1565.5	1624.1	1708.0	1734.7
52.5°	1397.6	1429.6	1486.9	1564.1	1602.8
55°	1264.4	1285.7	1348.3	1422.9	1464.2
57.5°	1125.8	1145.8	1216.4	1280.4	1323.0
60°	992.6	1017.9	1072.5	1137.8	1187.1
62.5°	864.7	891.3	937.9	995.2	1051.2
65°	740.8	760.8	806.0	863.3	912.6
67.5°	620.9	638.2	683.5	723.4	775.4
70°	499.6	522.3	555.6	594.2	627.5
72.5°	402.4	411.7	439.7	467.6	502.3
75°	297.1	313.1	335.7	351.7	371.7
77.5°	213.2	222.5	235.8	249.1	267.8
80°	142.6	146.6	158.5	161.2	175.9
82.5°	86.6	89.3	91.9	93.3	98.6
85°	46.6	46.6	46.6	44.0	44.0
87.5°	26.6	26.6	22.6	18.7	13.3
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)