

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: P556682

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-81-94-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: P556682
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-LD4-1STD-30-UNV-81-94-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

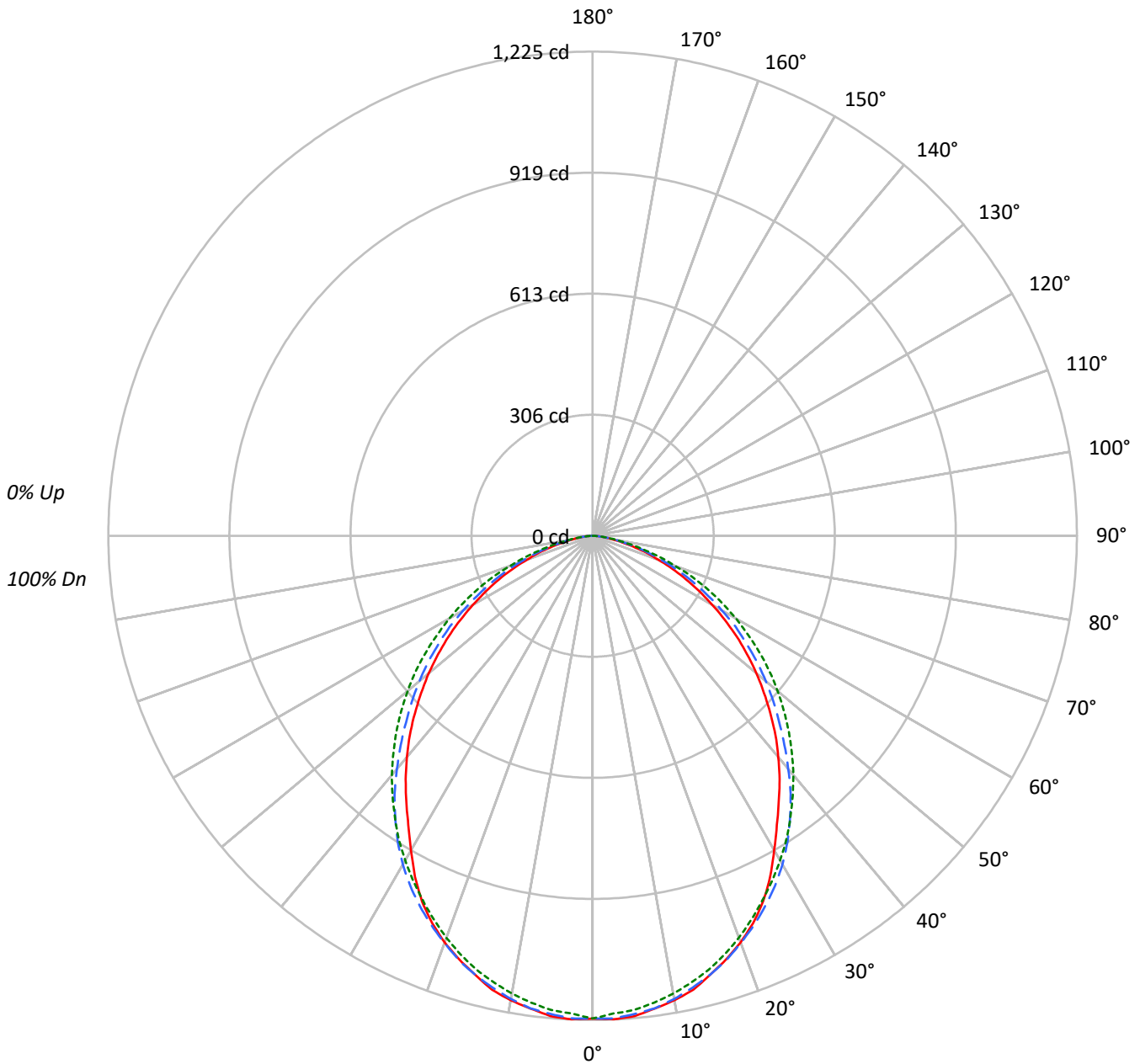
Lumens per Lamp: N/A
Luminaire Lumens: 2824.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	3286	3286	3286
5°	3295	3281	3253
10°	3260	3251	3214
15°	3202	3202	3166
20°	3135	3139	3099
25°	3032	3069	3020
30°	2855	2983	2946
35°	2697	2859	2864
40°	2566	2705	2775
45°	2420	2541	2671
50°	2265	2394	2557
55°	2089	2228	2419
60°	1881	2033	2250
65°	1661	1808	2046
70°	1384	1540	1739
75°	1088	1229	1361
80°	778	865	959
85°	506	506	479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.0	4.1
10°-20°	323.0	11.4
20°-30°	472.1	16.7
30°-40°	535.8	19.0
40°-50°	517.3	18.3
50°-60°	426.7	15.1
60°-70°	284.2	10.1
70°-80°	127.2	4.5
80°-90°	22.7	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°	910.1	32.2
0°-40°	1445.9	51.2
0°-60°	2389.9	84.6
0°-90°	2824.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2824.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1221	1221	1221	1221	1221	
5°	1220	1219	1215	1208	1204	115
15°	1150	1152	1150	1144	1136	324
25°	1021	1029	1034	1026	1017	468
35°	821	832	870	875	872	514
45°	636	646	668	698	702	491
55°	445	453	475	501	516	397
65°	261	268	284	304	321	259
75°	105	110	118	124	131	114
85°	16	16	16	16	16	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1221.3	1221.3	1221.3	1221.3	1221.3
2.5°	1224.6	1225.1	1222.2	1214.7	1210.0
5°	1219.9	1219.4	1214.7	1208.2	1204.4
7.5°	1206.3	1207.2	1205.8	1196.4	1191.3
10°	1193.2	1193.6	1189.9	1182.4	1176.3
12.5°	1176.3	1175.8	1170.6	1166.9	1157.0
15°	1149.5	1152.3	1149.5	1144.4	1136.4
17.5°	1123.7	1123.7	1125.6	1116.7	1110.6
20°	1094.6	1096.0	1096.0	1089.0	1082.0
22.5°	1060.8	1065.1	1066.5	1059.0	1050.5
25°	1021.0	1028.9	1033.6	1026.1	1017.2
27.5°	972.6	984.8	998.9	993.3	983.4
30°	918.7	936.5	960.0	955.3	948.2
32.5°	867.5	885.4	917.7	915.9	912.1
35°	821.1	832.3	870.4	875.0	871.8
37.5°	777.0	787.3	823.0	833.8	830.9
40°	730.5	741.8	769.9	789.2	790.1
42.5°	684.6	695.3	718.3	746.0	746.0
45°	635.8	646.5	667.7	698.2	701.9
47.5°	587.9	599.2	619.8	650.3	656.4
50°	541.0	551.3	571.9	601.5	610.9
52.5°	492.2	503.4	523.6	550.8	564.4
55°	445.3	452.8	474.8	501.1	515.6
57.5°	396.5	403.5	428.4	450.9	465.9
60°	349.5	358.5	377.7	400.7	418.1
62.5°	304.5	313.9	330.3	350.5	370.2
65°	260.9	267.9	283.9	304.0	321.4
67.5°	218.6	224.7	240.7	254.8	273.1
70°	175.9	183.9	195.7	209.3	221.0
72.5°	141.7	145.0	154.8	164.7	176.9
75°	104.6	110.3	118.2	123.9	130.9
77.5°	75.1	78.4	83.0	87.7	94.3
80°	50.2	51.6	55.8	56.8	61.9
82.5°	30.5	31.4	32.4	32.8	34.7
85°	16.4	16.4	16.4	15.5	15.5
87.5°	9.4	9.4	8.0	6.6	4.7
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)