

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: P558214

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-81-87-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: P558214
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-81-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

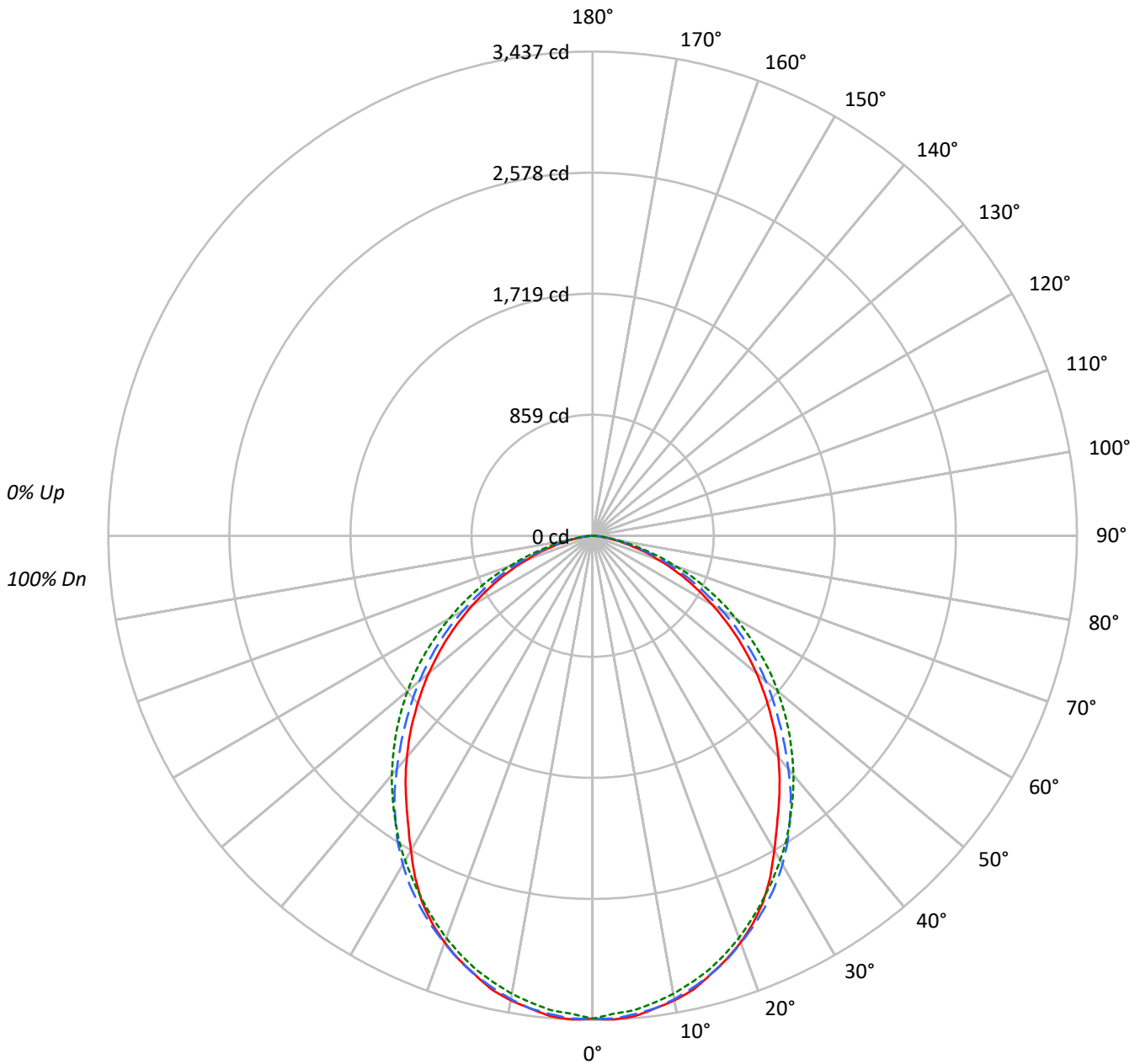
Lumens per Lamp: N/A
Luminaire Lumens: 7926.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9224	9224	9224
5°	9249	9210	9131
10°	9151	9125	9021
15°	8988	8988	8885
20°	8798	8809	8696
25°	8508	8614	8477
30°	8012	8372	8270
35°	7570	8025	8038
40°	7203	7591	7790
45°	6790	7131	7497
50°	6356	6720	7178
55°	5863	6252	6790
60°	5280	5705	6315
65°	4662	5073	5744
70°	3885	4320	4880
75°	3054	3450	3820
80°	2183	2428	2693
85°	1423	1423	1343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.7	4.1
10°-20°	906.7	11.4
20°-30°	1324.9	16.7
30°-40°	1503.9	19.0
40°-50°	1451.8	18.3
50°-60°	1197.7	15.1
60°-70°	797.5	10.1
70°-80°	356.9	4.5
80°-90°	63.8	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°	2554.3	32.2
0°-40°	4058.3	51.2
0°-60°	6707.7	84.6
0°-90°	7926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3428	3428	3428	3428	3428	
5°	3424	3422	3409	3391	3380	324
15°	3226	3234	3226	3212	3189	910
25°	2866	2888	2901	2880	2855	1312
35°	2304	2336	2443	2456	2447	1444
45°	1784	1815	1874	1960	1970	1377
55°	1250	1271	1333	1406	1447	1115
65°	732	752	797	853	902	726
75°	294	310	332	348	367	321
85°	46	46	46	44	44	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3427.8	<i>3427.8</i>	3427.8	3427.8	3427.8
2.5°	<i>3437.0</i>	<i>3438.3</i>	<i>3430.4</i>	<i>3409.4</i>	<i>3396.2</i>
5°	3423.8	<i>3422.5</i>	3409.4	3390.9	3380.4
7.5°	3385.7	<i>3388.3</i>	3384.3	3358.0	3343.5
10°	3348.8	<i>3350.1</i>	3339.6	3318.5	3301.4
12.5°	3301.4	<i>3300.1</i>	3285.6	3275.0	3247.4
15°	3226.3	<i>3234.2</i>	3226.3	3211.8	3189.4
17.5°	3153.9	<i>3153.9</i>	3159.2	3134.1	3117.0
20°	3072.2	<i>3076.2</i>	3076.2	3056.4	3036.7
22.5°	2977.4	<i>2989.3</i>	2993.2	2972.2	2948.5
25°	2865.5	<i>2887.9</i>	2901.0	2880.0	2855.0
27.5°	2729.9	<i>2764.1</i>	2803.6	2787.8	2760.1
30°	2578.4	<i>2628.5</i>	2694.3	2681.1	2661.4
32.5°	2434.9	<i>2484.9</i>	2575.8	2570.5	2560.0
35°	2304.5	<i>2336.1</i>	2442.8	2455.9	2446.7
37.5°	2180.7	<i>2209.7</i>	2309.8	2340.1	2332.2
40°	2050.4	<i>2082.0</i>	2161.0	2215.0	2217.6
42.5°	1921.3	<i>1951.6</i>	2016.1	2093.8	2093.8
45°	1784.3	<i>1814.6</i>	1873.9	1959.5	1970.0
47.5°	1650.0	<i>1681.6</i>	1739.6	1825.2	1842.3
50°	1518.3	<i>1547.3</i>	1605.3	1688.2	1714.6
52.5°	1381.4	<i>1413.0</i>	1469.6	1546.0	1584.2
55°	1249.7	<i>1270.8</i>	1332.7	1406.4	1447.2
57.5°	1112.7	<i>1132.5</i>	1202.3	1265.5	1307.6
60°	981.1	<i>1006.1</i>	1060.1	1124.6	1173.3
62.5°	854.6	<i>881.0</i>	927.1	983.7	1039.0
65°	732.2	<i>751.9</i>	796.7	853.3	902.1
67.5°	613.7	<i>630.8</i>	675.5	715.1	766.4
70°	493.8	<i>516.2</i>	549.1	587.3	620.2
72.5°	397.7	<i>406.9</i>	434.6	462.2	496.5
75°	293.7	<i>309.5</i>	331.8	347.7	367.4
77.5°	210.7	<i>219.9</i>	233.1	246.3	264.7
80°	140.9	<i>144.9</i>	156.7	159.3	173.8
82.5°	85.6	<i>88.2</i>	90.9	92.2	97.4
85°	46.1	<i>46.1</i>	46.1	43.5	43.5
87.5°	26.3	<i>26.3</i>	22.4	18.4	13.2
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)