

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: P556196

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-86-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: P556196
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-LD4-1HI-30-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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

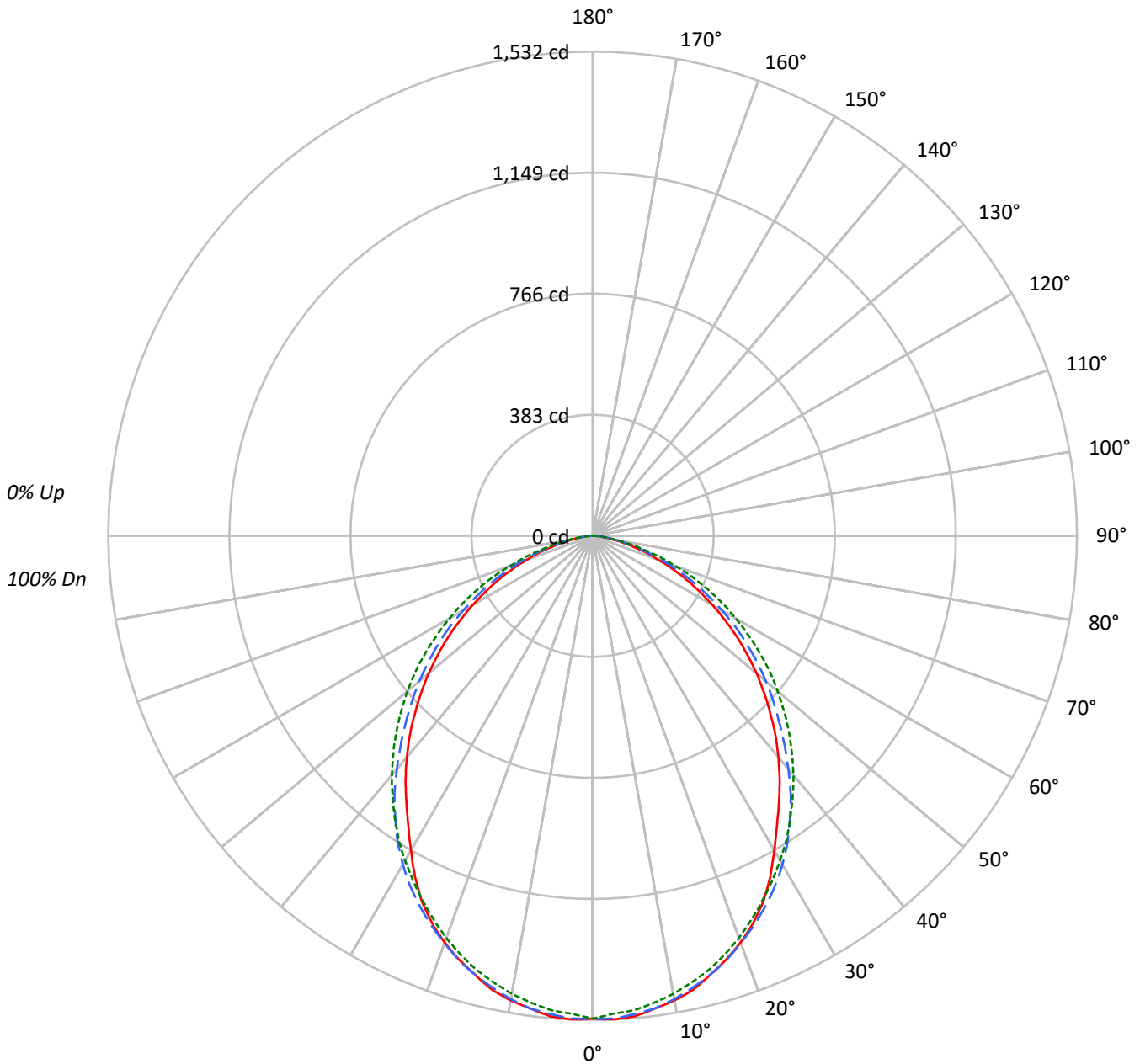
Lumens per Lamp: N/A
Luminaire Lumens: 3533.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4112	4112	4112
5°	4123	4105	4070
10°	4079	4068	4021
15°	4006	4006	3961
20°	3922	3927	3876
25°	3793	3839	3779
30°	3571	3732	3686
35°	3374	3577	3583
40°	3210	3384	3472
45°	3027	3179	3342
50°	2833	2995	3200
55°	2614	2787	3027
60°	2354	2543	2815
65°	2078	2261	2560
70°	1732	1926	2175
75°	1361	1538	1703
80°	973	1083	1201
85°	633	633	599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	4.1
10°-20°	404.1	11.4
20°-30°	590.6	16.7
30°-40°	670.4	19.0
40°-50°	647.1	18.3
50°-60°	533.8	15.1
60°-70°	355.5	10.1
70°-80°	159.1	4.5
80°-90°	28.5	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°	1138.6	32.2
0°-40°	1809.0	51.2
0°-60°	2989.9	84.6
0°-90°	3533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3533.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1526	1526	1520	1512	1507	144
15°	1438	1442	1438	1432	1422	405
25°	1277	1287	1293	1284	1273	585
35°	1027	1041	1089	1095	1091	644
45°	795	809	835	873	878	614
55°	557	566	594	627	645	497
65°	326	335	355	380	402	324
75°	131	138	148	155	164	143
85°	20	20	20	19	19	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.9	1527.9	1527.9	1527.9	1527.9
2.5°	1532.0	1532.6	1529.1	1519.7	1513.8
5°	1526.2	1525.6	1519.7	1511.5	1506.8
7.5°	1509.1	1510.3	1508.6	1496.8	1490.4
10°	1492.7	1493.3	1488.6	1479.2	1471.6
12.5°	1471.6	1471.0	1464.5	1459.8	1447.5
15°	1438.1	1441.6	1438.1	1431.7	1421.7
17.5°	1405.8	1405.8	1408.2	1397.0	1389.4
20°	1369.4	1371.2	1371.2	1362.4	1353.6
22.5°	1327.2	1332.5	1334.2	1324.8	1314.3
25°	1277.3	1287.3	1293.1	1283.7	1272.6
27.5°	1216.8	1232.1	1249.7	1242.7	1230.3
30°	1149.3	1171.6	1201.0	1195.1	1186.3
32.5°	1085.3	1107.6	1148.1	1145.8	1141.1
35°	1027.2	1041.3	1088.9	1094.7	1090.6
37.5°	972.1	985.0	1029.6	1043.1	1039.6
40°	913.9	928.0	963.2	987.3	988.5
42.5°	856.4	869.9	898.7	933.3	933.3
45°	795.4	808.9	835.3	873.4	878.1
47.5°	735.5	749.6	775.4	813.6	821.2
50°	676.8	689.7	715.5	752.5	764.3
52.5°	615.8	629.8	655.1	689.1	706.1
55°	557.1	566.4	594.0	626.9	645.1
57.5°	496.0	504.8	535.9	564.1	582.9
60°	437.3	448.5	472.5	501.3	523.0
62.5°	381.0	392.7	413.2	438.5	463.1
65°	326.4	335.2	355.1	380.4	402.1
67.5°	273.5	281.2	301.1	318.7	341.6
70°	220.1	230.1	244.8	261.8	276.5
72.5°	177.3	181.4	193.7	206.0	221.3
75°	130.9	137.9	147.9	155.0	163.8
77.5°	93.9	98.0	103.9	109.8	118.0
80°	62.8	64.6	69.9	71.0	77.5
82.5°	38.2	39.3	40.5	41.1	43.4
85°	20.5	20.5	20.5	19.4	19.4
87.5°	11.7	11.7	10.0	8.2	5.9
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)