

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: P556234

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-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: P556234
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-35-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 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

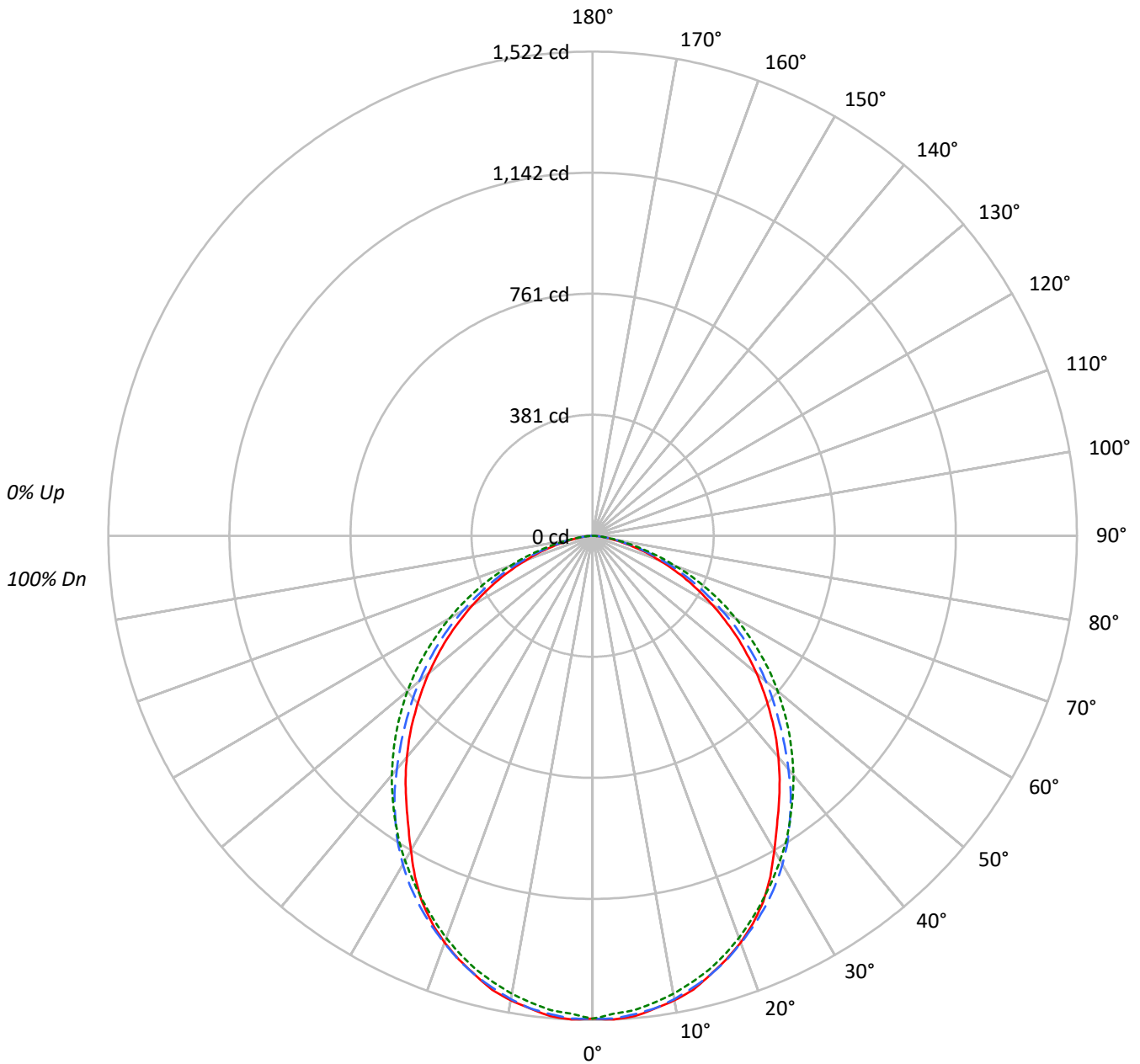
Lumens per Lamp: N/A
Luminaire Lumens: 3510.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	4085	4085	4085
5°	4096	4078	4044
10°	4052	4041	3995
15°	3981	3981	3935
20°	3896	3901	3851
25°	3768	3814	3754
30°	3548	3708	3662
35°	3352	3554	3559
40°	3190	3362	3450
45°	3007	3158	3320
50°	2815	2976	3179
55°	2596	2769	3007
60°	2338	2526	2796
65°	2064	2246	2544
70°	1721	1913	2161
75°	1352	1528	1692
80°	967	1075	1193
85°	630	630	593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	4.1
10°-20°	401.5	11.4
20°-30°	586.7	16.7
30°-40°	666.0	19.0
40°-50°	642.9	18.3
50°-60°	530.4	15.1
60°-70°	353.2	10.1
70°-80°	158.0	4.5
80°-90°	28.3	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°	1131.2	32.2
0°-40°	1797.2	51.2
0°-60°	2970.5	84.6
0°-90°	3510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3510.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1518	1518	1518	1518	1518	
5°	1516	1516	1510	1502	1497	144
15°	1429	1432	1429	1422	1412	403
25°	1269	1279	1285	1275	1264	581
35°	1020	1034	1082	1088	1084	639
45°	790	804	830	868	872	610
55°	553	563	590	623	641	494
65°	324	333	353	378	400	322
75°	130	137	147	154	163	142
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°	1518.0	1518.0	1518.0	1518.0	1518.0
2.5°	1522.1	1522.6	1519.2	1509.8	1504.0
5°	1516.2	1515.7	1509.8	1501.7	1497.0
7.5°	1499.3	1500.5	1498.7	1487.1	1480.7
10°	1483.0	1483.6	1478.9	1469.6	1462.0
12.5°	1462.0	1461.4	1455.0	1450.3	1438.1
15°	1428.8	1432.3	1428.8	1422.3	1412.4
17.5°	1396.7	1396.7	1399.0	1387.9	1380.4
20°	1360.5	1362.3	1362.3	1353.5	1344.8
22.5°	1318.5	1323.8	1325.5	1316.2	1305.7
25°	1269.0	1278.9	1284.7	1275.4	1264.3
27.5°	1208.9	1224.1	1241.6	1234.6	1222.3
30°	1141.8	1164.0	1193.2	1187.3	1178.6
32.5°	1078.3	1100.4	1140.7	1138.3	1133.7
35°	1020.5	1034.5	1081.8	1087.6	1083.5
37.5°	965.7	978.6	1022.9	1036.3	1032.8
40°	908.0	922.0	957.0	980.9	982.1
42.5°	850.8	864.3	892.8	927.2	927.2
45°	790.2	803.6	829.8	867.8	872.4
47.5°	730.7	744.7	770.4	808.3	815.9
50°	672.4	685.2	710.9	747.6	759.3
52.5°	611.7	625.7	650.8	684.6	701.6
55°	553.4	562.8	590.2	622.8	640.9
57.5°	492.8	501.5	532.4	560.4	579.1
60°	434.5	445.5	469.4	498.0	519.6
62.5°	378.5	390.1	410.5	435.6	460.1
65°	324.2	333.0	352.8	377.9	399.5
67.5°	271.8	279.3	299.2	316.7	339.4
70°	218.7	228.6	243.2	260.1	274.7
72.5°	176.1	180.2	192.4	204.7	219.9
75°	130.0	137.0	147.0	154.0	162.7
77.5°	93.3	97.4	103.2	109.1	117.2
80°	62.4	64.1	69.4	70.6	77.0
82.5°	37.9	39.1	40.2	40.8	43.2
85°	20.4	20.4	20.4	19.2	19.2
87.5°	11.7	11.7	9.9	8.2	5.8
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)