

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: P556320

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-84-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: P556320
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-40-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

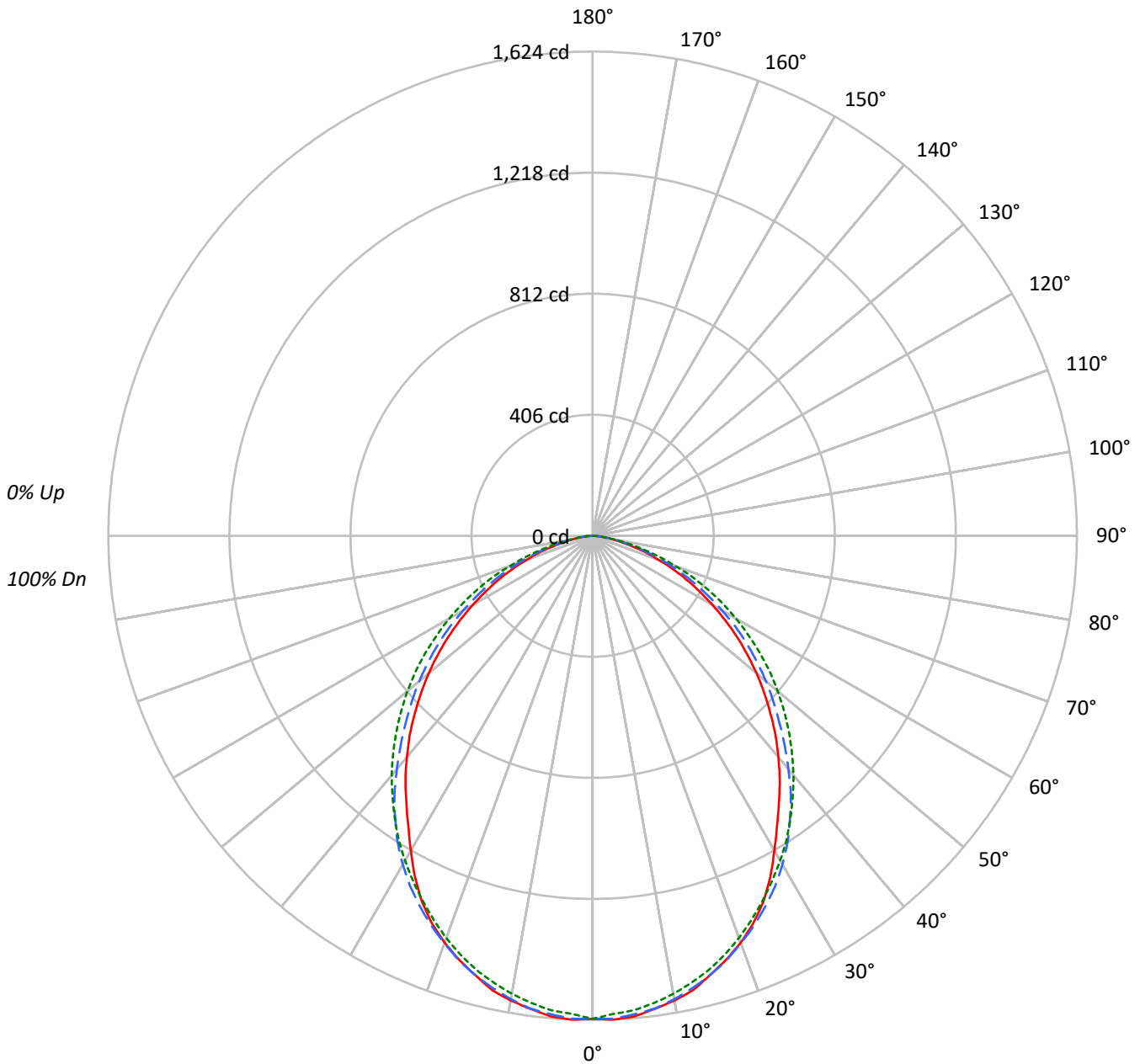
Lumens per Lamp: N/A
Luminaire Lumens: 3746.0 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4359	4359	4359
5°	4371	4353	4316
10°	4325	4313	4264
15°	4248	4248	4199
20°	4158	4164	4110
25°	4021	4071	4006
30°	3787	3957	3908
35°	3578	3793	3799
40°	3404	3588	3682
45°	3209	3370	3543
50°	3004	3176	3392
55°	2771	2955	3209
60°	2496	2696	2984
65°	2203	2397	2714
70°	1836	2042	2306
75°	1443	1630	1805
80°	1032	1148	1274
85°	673	673	633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.5	4.1
10°-20°	428.5	11.4
20°-30°	626.2	16.7
30°-40°	710.8	19.0
40°-50°	686.2	18.3
50°-60°	566.0	15.1
60°-70°	376.9	10.1
70°-80°	168.7	4.5
80°-90°	30.2	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°	1207.2	32.2
0°-40°	1918.0	51.2
0°-60°	3170.2	84.6
0°-90°	3746.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3746.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1618	1618	1611	1603	1598	153
15°	1525	1529	1525	1518	1507	430
25°	1354	1365	1371	1361	1349	620
35°	1089	1104	1154	1161	1156	682
45°	843	858	886	926	931	651
55°	591	601	630	665	684	527
65°	346	355	376	403	426	343
75°	139	146	157	164	174	152
85°	22	22	22	20	20	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1620.0	1620.0	1620.0	1620.0	1620.0
2.5°	1624.4	1625.0	1621.3	1611.3	1605.1
5°	1618.2	1617.6	1611.3	1602.6	1597.6
7.5°	1600.1	1601.4	1599.5	1587.1	1580.2
10°	1582.7	1583.3	1578.3	1568.4	1560.3
12.5°	1560.3	1559.7	1552.8	1547.9	1534.8
15°	1524.8	1528.6	1524.8	1518.0	1507.4
17.5°	1490.6	1490.6	1493.1	1481.3	1473.2
20°	1452.0	1453.9	1453.9	1444.5	1435.2
22.5°	1407.2	1412.8	1414.7	1404.7	1393.5
25°	1354.3	1364.9	1371.1	1361.1	1349.3
27.5°	1290.2	1306.4	1325.0	1317.6	1304.5
30°	1218.6	1242.3	1273.4	1267.2	1257.8
32.5°	1150.8	1174.4	1217.4	1214.9	1209.9
35°	1089.2	1104.1	1154.5	1160.7	1156.4
37.5°	1030.7	1044.3	1091.6	1106.0	1102.2
40°	969.0	984.0	1021.3	1046.8	1048.1
42.5°	908.0	922.4	952.9	989.6	989.6
45°	843.3	857.6	885.6	926.1	931.1
47.5°	779.8	794.8	822.2	862.6	870.7
50°	717.6	731.3	758.7	797.9	810.3
52.5°	652.9	667.8	694.6	730.7	748.7
55°	590.6	600.6	629.8	664.7	684.0
57.5°	525.9	535.2	568.2	598.1	618.0
60°	463.7	475.5	501.0	531.5	554.5
62.5°	403.9	416.4	438.2	464.9	491.1
65°	346.0	355.4	376.5	403.3	426.3
67.5°	290.0	298.1	319.3	338.0	362.2
70°	233.4	244.0	259.5	277.6	293.1
72.5°	188.0	192.3	205.4	218.5	234.6
75°	138.8	146.3	156.8	164.3	173.6
77.5°	99.6	103.9	110.2	116.4	125.1
80°	66.6	68.5	74.1	75.3	82.2
82.5°	40.5	41.7	42.9	43.6	46.1
85°	21.8	21.8	21.8	20.5	20.5
87.5°	12.4	12.4	10.6	8.7	6.2
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)