

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: P556903

Luminaire Tested: **FUSL-12-4-LD4-1STD-50-UNV-93-87-EDD**

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: P556903
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-50-UNV-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

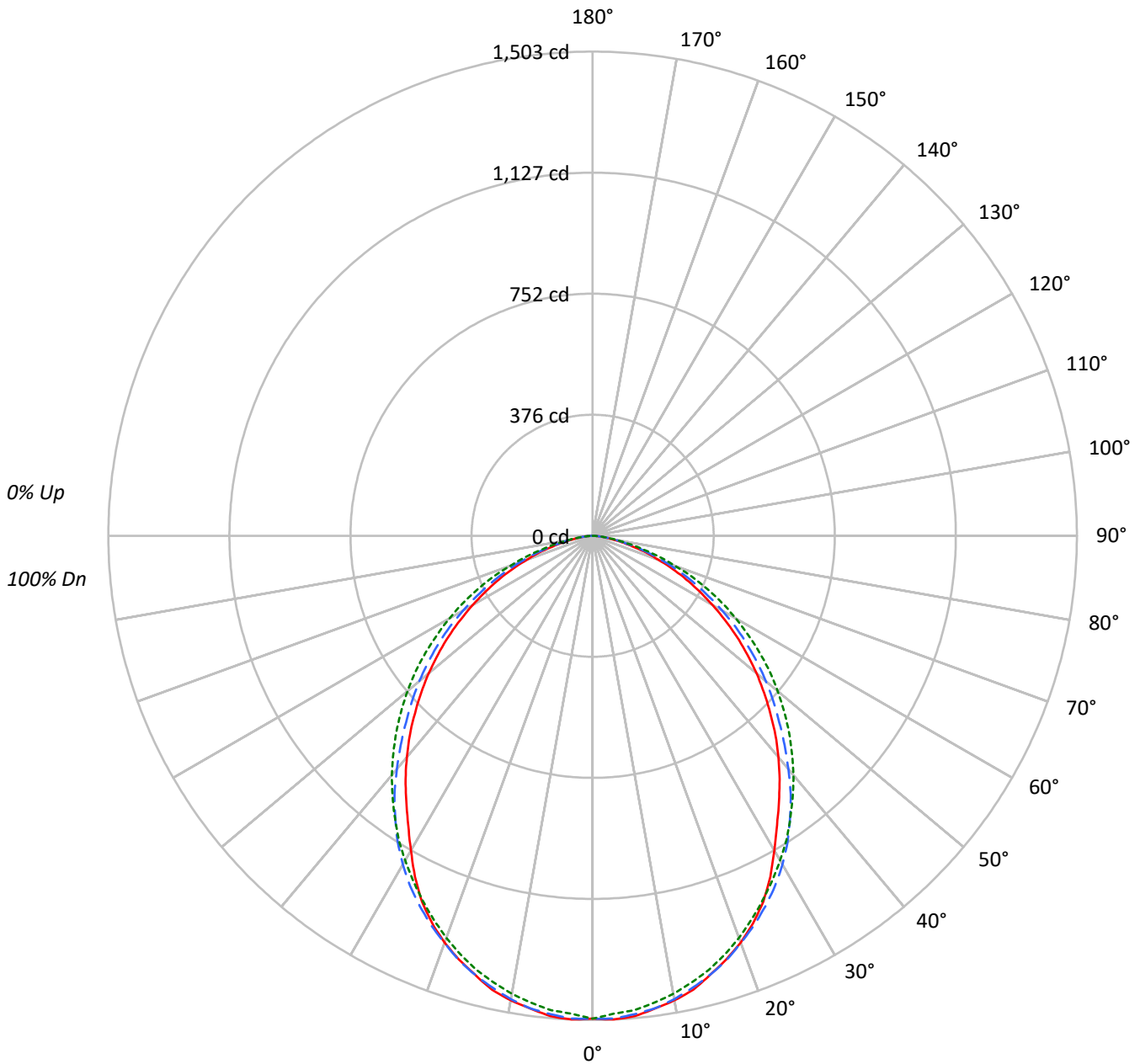
Lumens per Lamp: N/A
Luminaire Lumens: 3466.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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°	4034	4034	4034
5°	4044	4027	3993
10°	4001	3991	3945
15°	3930	3930	3886
20°	3847	3852	3803
25°	3721	3767	3707
30°	3503	3661	3616
35°	3310	3509	3515
40°	3150	3320	3406
45°	2970	3118	3279
50°	2780	2939	3139
55°	2564	2734	2969
60°	2309	2495	2761
65°	2039	2218	2512
70°	1699	1889	2134
75°	1335	1509	1671
80°	955	1062	1178
85°	624	624	587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	4.1
10°-20°	396.5	11.4
20°-30°	579.4	16.7
30°-40°	657.7	19.0
40°-50°	634.9	18.3
50°-60°	523.7	15.1
60°-70°	348.8	10.1
70°-80°	156.0	4.5
80°-90°	27.9	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°	1117.0	32.2
0°-40°	1774.7	51.2
0°-60°	2933.3	84.6
0°-90°	3466.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3466.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1499	1499	1499	1499	1499	
5°	1497	1497	1491	1483	1478	142
15°	1411	1414	1411	1404	1395	398
25°	1253	1263	1269	1259	1248	574
35°	1008	1022	1068	1074	1070	631
45°	780	794	819	857	862	602
55°	546	556	583	615	633	488
65°	320	329	348	373	394	317
75°	128	135	145	152	161	140
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1499.0	1499.0	1499.0	1499.0	1499.0
2.5°	1503.0	1503.6	1500.1	1490.9	1485.1
5°	1497.2	1496.7	1490.9	1482.8	1478.2
7.5°	1480.5	1481.7	1480.0	1468.4	1462.1
10°	1464.4	1465.0	1460.4	1451.2	1443.7
12.5°	1443.7	1443.1	1436.8	1432.2	1420.1
15°	1410.8	1414.3	1410.8	1404.5	1394.7
17.5°	1379.2	1379.2	1381.5	1370.5	1363.1
20°	1343.5	1345.2	1345.2	1336.6	1327.9
22.5°	1302.0	1307.2	1308.9	1299.7	1289.3
25°	1253.1	1262.9	1268.6	1259.4	1248.5
27.5°	1193.8	1208.7	1226.0	1219.1	1207.0
30°	1127.5	1149.4	1178.2	1172.4	1163.8
32.5°	1064.8	1086.6	1126.4	1124.1	1119.5
35°	1007.7	1021.6	1068.2	1074.0	1069.9
37.5°	953.6	966.3	1010.1	1023.3	1019.8
40°	896.6	910.4	945.0	968.6	969.7
42.5°	840.2	853.4	881.6	915.6	915.6
45°	780.3	793.5	819.4	856.9	861.5
47.5°	721.5	735.4	760.7	798.1	805.6
50°	664.0	676.6	702.0	738.2	749.8
52.5°	604.1	617.9	642.7	676.1	692.8
55°	546.5	555.7	582.8	615.0	632.9
57.5°	486.6	495.2	525.8	553.4	571.8
60°	429.0	440.0	463.6	491.8	513.1
62.5°	373.7	385.2	405.4	430.2	454.4
65°	320.2	328.8	348.4	373.2	394.5
67.5°	268.3	275.8	295.4	312.7	335.1
70°	215.9	225.7	240.1	256.8	271.2
72.5°	173.9	177.9	190.0	202.1	217.1
75°	128.4	135.3	145.1	152.0	160.7
77.5°	92.1	96.2	101.9	107.7	115.7
80°	61.6	63.3	68.5	69.7	76.0
82.5°	37.4	38.6	39.7	40.3	42.6
85°	20.2	20.2	20.2	19.0	19.0
87.5°	11.5	11.5	9.8	8.1	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)