

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: P557352

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-88-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: P557352
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-LD4-2LO-40-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

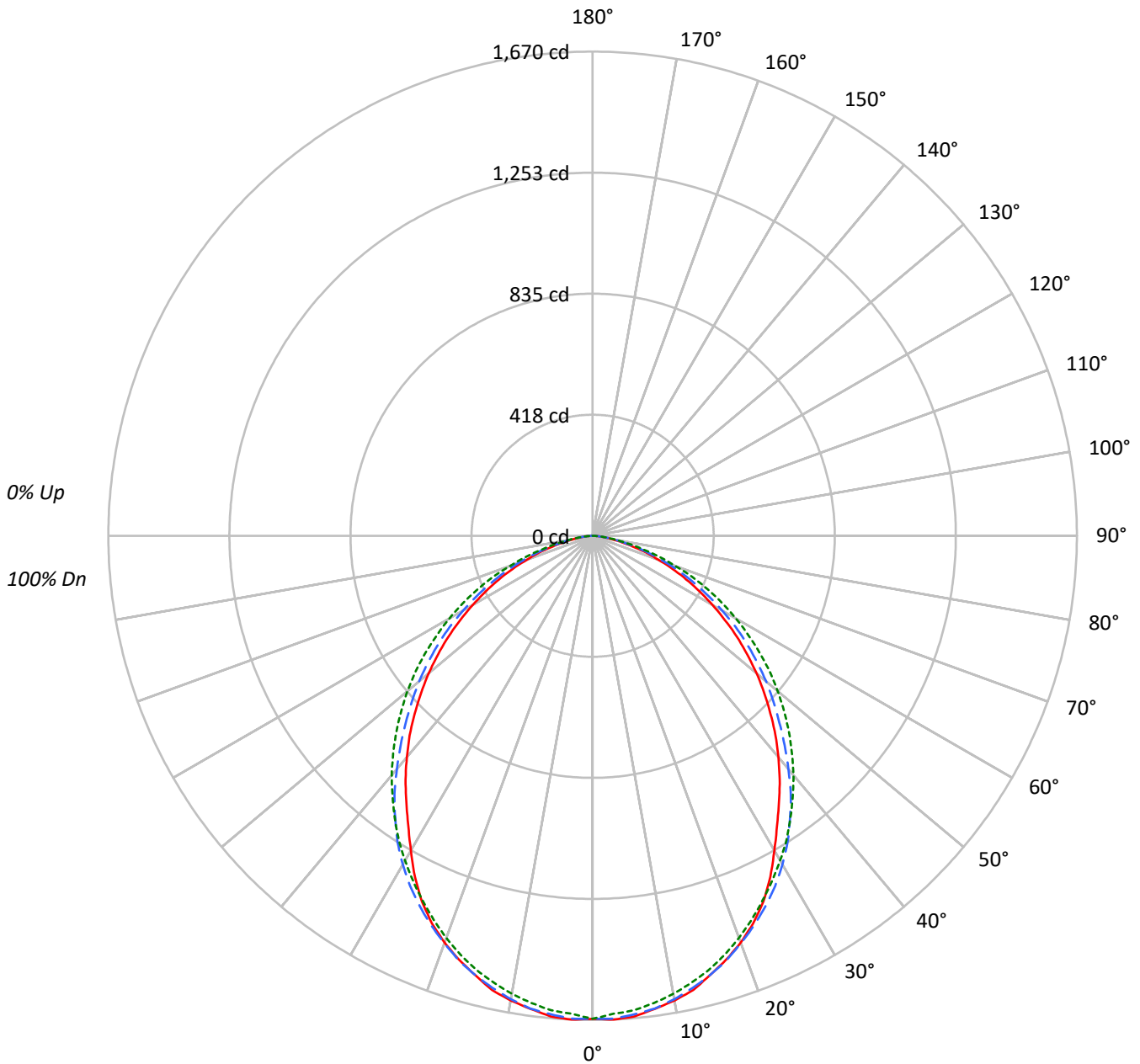
Lumens per Lamp: N/A
Luminaire Lumens: 3852.0 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4483	4483	4483
5°	4495	4476	4438
10°	4447	4435	4384
15°	4368	4368	4318
20°	4276	4281	4226
25°	4135	4186	4120
30°	3894	4069	4019
35°	3679	3900	3906
40°	3501	3689	3786
45°	3300	3466	3643
50°	3089	3266	3489
55°	2849	3039	3300
60°	2566	2773	3069
65°	2266	2465	2791
70°	1888	2100	2371
75°	1484	1677	1857
80°	1062	1181	1309
85°	692	692	651



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	4.1
10°-20°	440.6	11.4
20°-30°	643.9	16.7
30°-40°	730.9	19.0
40°-50°	705.6	18.3
50°-60°	582.0	15.1
60°-70°	387.6	10.1
70°-80°	173.5	4.5
80°-90°	31.0	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°	1241.4	32.2
0°-40°	1972.3	51.2
0°-60°	3259.9	84.6
0°-90°	3852.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3852.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1666	1666	1666	1666	1666	
5°	1664	1663	1657	1648	1643	157
15°	1568	1572	1568	1561	1550	442
25°	1393	1404	1410	1400	1388	638
35°	1120	1135	1187	1194	1189	702
45°	867	882	911	952	957	669
55°	607	618	648	684	703	542
65°	356	365	387	415	438	353
75°	143	150	161	169	179	156
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1665.9	1665.9	1665.9	1665.9	1665.9
2.5°	1670.4	1671.0	1667.2	1656.9	1650.5
5°	1664.0	1663.3	1656.9	1648.0	1642.9
7.5°	1645.4	1646.7	1644.8	1632.0	1624.9
10°	1627.5	1628.1	1623.0	1612.8	1604.5
12.5°	1604.5	1603.8	1596.8	1591.7	1578.2
15°	1568.0	1571.8	1568.0	1560.9	1550.1
17.5°	1532.8	1532.8	1535.3	1523.2	1514.9
20°	1493.1	1495.0	1495.0	1485.4	1475.8
22.5°	1447.0	1452.8	1454.7	1444.5	1432.9
25°	1392.6	1403.5	1409.9	1399.7	1387.5
27.5°	1326.7	1343.3	1362.5	1354.9	1341.4
30°	1253.1	1277.4	1309.4	1303.0	1293.4
32.5°	1183.3	1207.7	1251.8	1249.3	1244.1
35°	1120.0	1135.3	1187.2	1193.6	1189.1
37.5°	1059.8	1073.9	1122.5	1137.3	1133.4
40°	996.5	1011.8	1050.2	1076.5	1077.7
42.5°	933.7	948.5	979.8	1017.6	1017.6
45°	867.2	881.9	910.7	952.3	957.4
47.5°	801.9	817.3	845.4	887.0	895.3
50°	737.9	752.0	780.1	820.5	833.3
52.5°	671.3	686.7	714.2	751.3	769.9
55°	607.3	617.6	647.7	683.5	703.3
57.5°	540.8	550.4	584.3	615.0	635.5
60°	476.8	489.0	515.2	546.6	570.2
62.5°	415.4	428.2	450.6	478.1	505.0
65°	355.8	365.4	387.2	414.7	438.4
67.5°	298.2	306.6	328.3	347.5	372.5
70°	240.0	250.9	266.9	285.4	301.4
72.5°	193.3	197.8	211.2	224.6	241.3
75°	142.7	150.4	161.3	169.0	178.6
77.5°	102.4	106.9	113.3	119.7	128.6
80°	68.5	70.4	76.2	77.4	84.5
82.5°	41.6	42.9	44.2	44.8	47.4
85°	22.4	22.4	22.4	21.1	21.1
87.5°	12.8	12.8	10.9	9.0	6.4
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)