

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: P556170

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-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: P556170
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-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 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

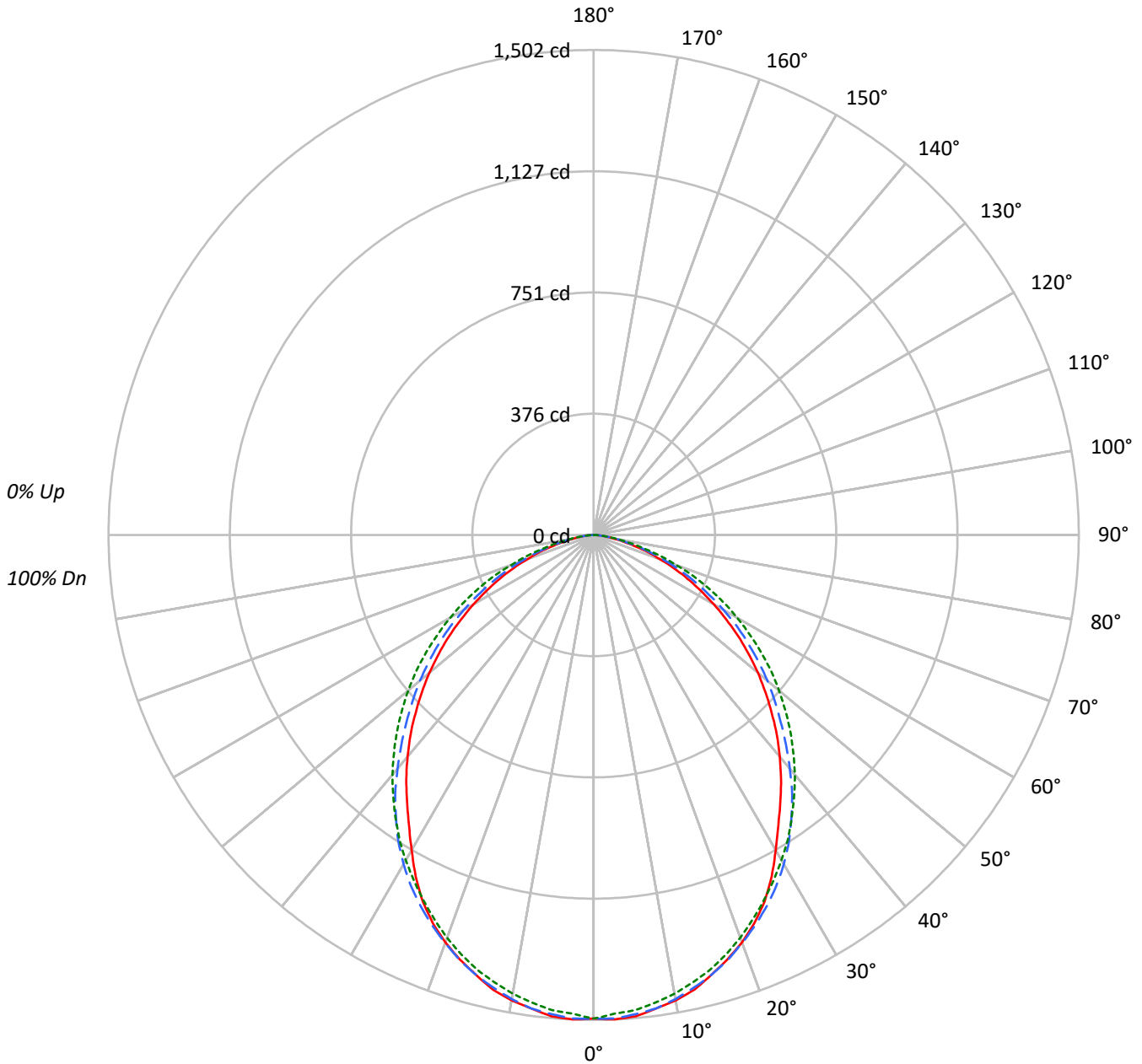
Lumens per Lamp: N/A
Luminaire Lumens: 3464.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	4031	4031	4031
5°	4042	4025	3991
10°	3999	3988	3942
15°	3928	3928	3883
20°	3845	3850	3801
25°	3718	3765	3705
30°	3502	3659	3614
35°	3309	3507	3513
40°	3148	3318	3405
45°	2968	3117	3277
50°	2778	2937	3137
55°	2563	2732	2967
60°	2308	2493	2760
65°	2038	2217	2510
70°	1698	1888	2133
75°	1334	1508	1670
80°	955	1062	1178
85°	621	621	587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	4.1
10°-20°	396.2	11.4
20°-30°	579.0	16.7
30°-40°	657.3	19.0
40°-50°	634.5	18.3
50°-60°	523.4	15.1
60°-70°	348.6	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°	1116.3	32.2
0°-40°	1773.6	51.2
0°-60°	2931.6	84.6
0°-90°	3464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1498	1498	1498	1498	1498	
5°	1496	1496	1490	1482	1477	142
15°	1410	1414	1410	1404	1394	397
25°	1252	1262	1268	1259	1248	574
35°	1007	1021	1068	1073	1069	631
45°	780	793	819	856	861	602
55°	546	555	582	615	632	487
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°	1498.1	1498.1	1498.1	1498.1	1498.1
2.5°	1502.1	1502.7	1499.2	1490.0	1484.3
5°	1496.4	1495.8	1490.0	1482.0	1477.4
7.5°	1479.7	1480.8	1479.1	1467.6	1461.3
10°	1463.6	1464.1	1459.5	1450.3	1442.8
12.5°	1442.8	1442.3	1435.9	1431.3	1419.2
15°	1410.0	1413.5	1410.0	1403.7	1393.9
17.5°	1378.4	1378.4	1380.7	1369.7	1362.3
20°	1342.7	1344.4	1344.4	1335.8	1327.2
22.5°	1301.3	1306.4	1308.2	1299.0	1288.6
25°	1252.3	1262.1	1267.9	1258.7	1247.7
27.5°	1193.1	1208.0	1225.3	1218.4	1206.3
30°	1126.9	1148.7	1177.5	1171.8	1163.1
32.5°	1064.1	1086.0	1125.7	1123.4	1118.8
35°	1007.2	1021.0	1067.6	1073.4	1069.3
37.5°	953.1	965.7	1009.5	1022.7	1019.3
40°	896.1	909.9	944.4	968.0	969.2
42.5°	839.7	852.9	881.1	915.1	915.1
45°	779.8	793.1	819.0	856.4	861.0
47.5°	721.1	734.9	760.3	797.7	805.2
50°	663.6	676.2	701.6	737.8	749.3
52.5°	603.7	617.5	642.3	675.7	692.4
55°	546.2	555.4	582.4	614.7	632.5
57.5°	486.3	495.0	525.5	553.1	571.5
60°	428.8	439.7	463.3	491.5	512.8
62.5°	373.5	385.0	405.2	429.9	454.1
65°	320.0	328.6	348.2	372.9	394.2
67.5°	268.2	275.7	295.2	312.5	335.0
70°	215.8	225.6	240.0	256.7	271.1
72.5°	173.8	177.8	189.9	202.0	217.0
75°	128.3	135.2	145.0	151.9	160.6
77.5°	92.1	96.1	101.9	107.6	115.7
80°	61.6	63.3	68.5	69.6	76.0
82.5°	37.4	38.6	39.7	40.3	42.6
85°	20.1	20.1	20.1	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)