

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: P556821

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-UNV-82-86-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: P556821
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-40-UNV-82-86-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

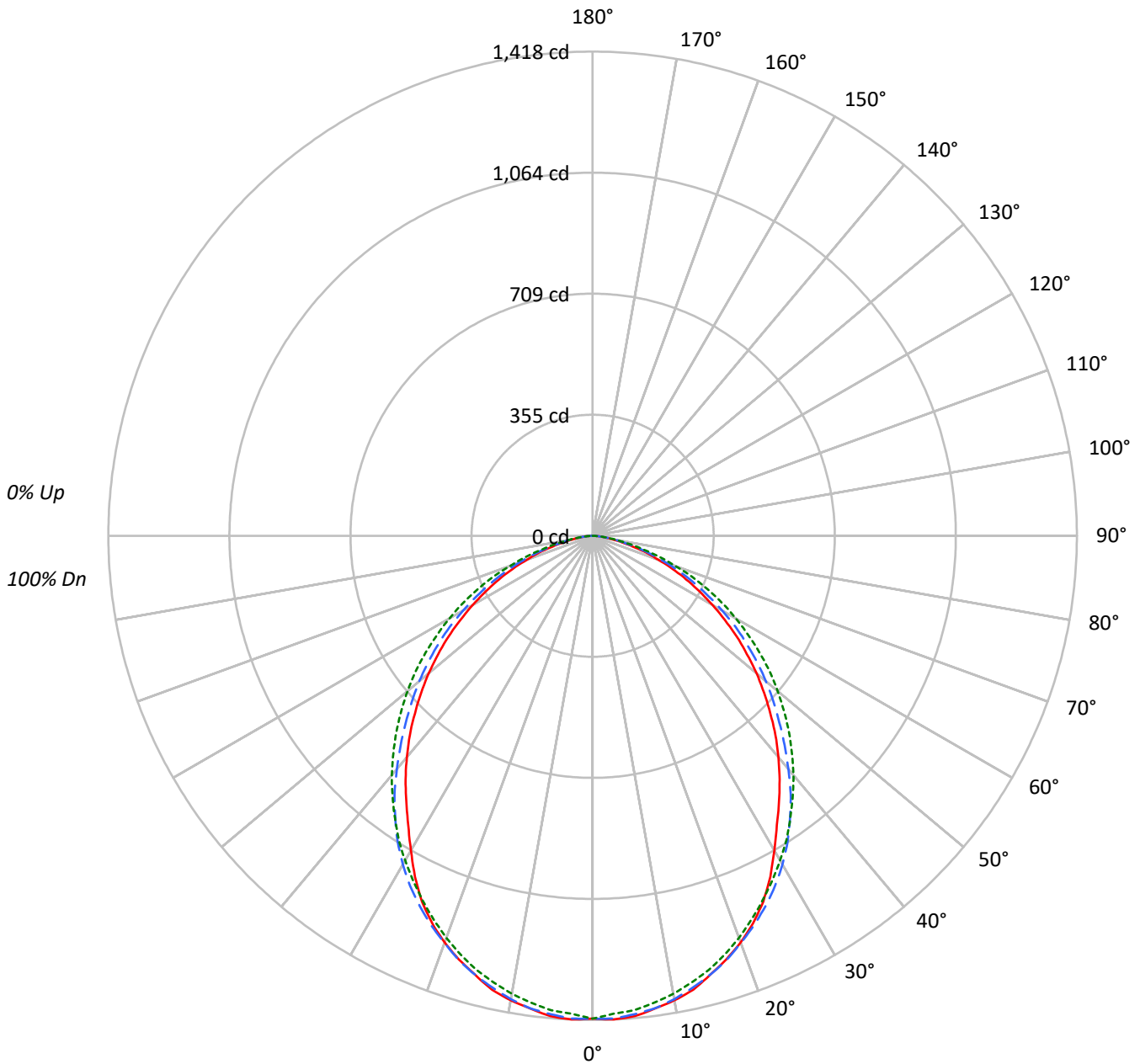
Lumens per Lamp: N/A
Luminaire Lumens: 3270.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3806	3806	3806
5°	3816	3800	3767
10°	3775	3765	3722
15°	3708	3708	3666
20°	3630	3634	3588
25°	3510	3554	3497
30°	3306	3454	3412
35°	3123	3311	3316
40°	2971	3132	3214
45°	2802	2942	3093
50°	2622	2773	2961
55°	2419	2579	2801
60°	2179	2354	2605
65°	1924	2093	2370
70°	1603	1783	2013
75°	1260	1423	1576
80°	900	1003	1111
85°	587	587	553



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	4.1
10°-20°	374.1	11.4
20°-30°	546.6	16.7
30°-40°	620.5	19.0
40°-50°	599.0	18.3
50°-60°	494.1	15.1
60°-70°	329.0	10.1
70°-80°	147.2	4.5
80°-90°	26.3	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°	1053.8	32.2
0°-40°	1674.3	51.2
0°-60°	2767.4	84.6
0°-90°	3270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1414	1414	1414	1414	1414	
5°	1413	1412	1407	1399	1395	134
15°	1331	1334	1331	1325	1316	375
25°	1182	1191	1197	1188	1178	541
35°	951	964	1008	1013	1009	596
45°	736	749	773	808	813	568
55°	516	524	550	580	597	460
65°	302	310	329	352	372	300
75°	121	128	137	143	152	132
85°	19	19	19	18	18	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1414.2	1414.2	1414.2	1414.2	1414.2
2.5°	1418.0	1418.5	1415.3	1406.6	1401.2
5°	1412.6	1412.0	1406.6	1399.0	1394.6
7.5°	1396.8	1397.9	1396.3	1385.4	1379.4
10°	1381.6	1382.1	1377.8	1369.1	1362.0
12.5°	1362.0	1361.5	1355.5	1351.2	1339.8
15°	1331.1	1334.3	1331.1	1325.1	1315.9
17.5°	1301.2	1301.2	1303.4	1293.0	1286.0
20°	1267.5	1269.1	1269.1	1261.0	1252.8
22.5°	1228.4	1233.3	1234.9	1226.2	1216.4
25°	1182.2	1191.4	1196.9	1188.2	1177.9
27.5°	1126.2	1140.4	1156.7	1150.2	1138.7
30°	1063.8	1084.4	1111.6	1106.1	1098.0
32.5°	1004.5	1025.2	1062.7	1060.5	1056.2
35°	950.8	963.8	1007.8	1013.2	1009.4
37.5°	899.7	911.6	952.9	965.4	962.2
40°	845.9	858.9	891.5	913.8	914.9
42.5°	792.7	805.2	831.8	863.8	863.8
45°	736.2	748.7	773.1	808.4	812.8
47.5°	680.7	693.8	717.7	753.0	760.1
50°	626.4	638.4	662.3	696.5	707.4
52.5°	569.9	583.0	606.3	637.8	653.6
55°	515.6	524.3	549.8	580.2	597.1
57.5°	459.1	467.2	496.0	522.1	539.5
60°	404.8	415.1	437.4	464.0	484.1
62.5°	352.6	363.5	382.5	405.8	428.7
65°	302.1	310.2	328.7	352.1	372.2
67.5°	253.2	260.2	278.7	295.0	316.2
70°	203.7	213.0	226.6	242.3	255.9
72.5°	164.1	167.9	179.3	190.7	204.8
75°	121.2	127.7	136.9	143.4	151.6
77.5°	86.9	90.7	96.2	101.6	109.2
80°	58.1	59.8	64.7	65.7	71.7
82.5°	35.3	36.4	37.5	38.0	40.2
85°	19.0	19.0	19.0	17.9	17.9
87.5°	10.9	10.9	9.2	7.6	5.4
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)