

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: P556687

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-81-97-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: P556687  
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-30-UNV-81-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

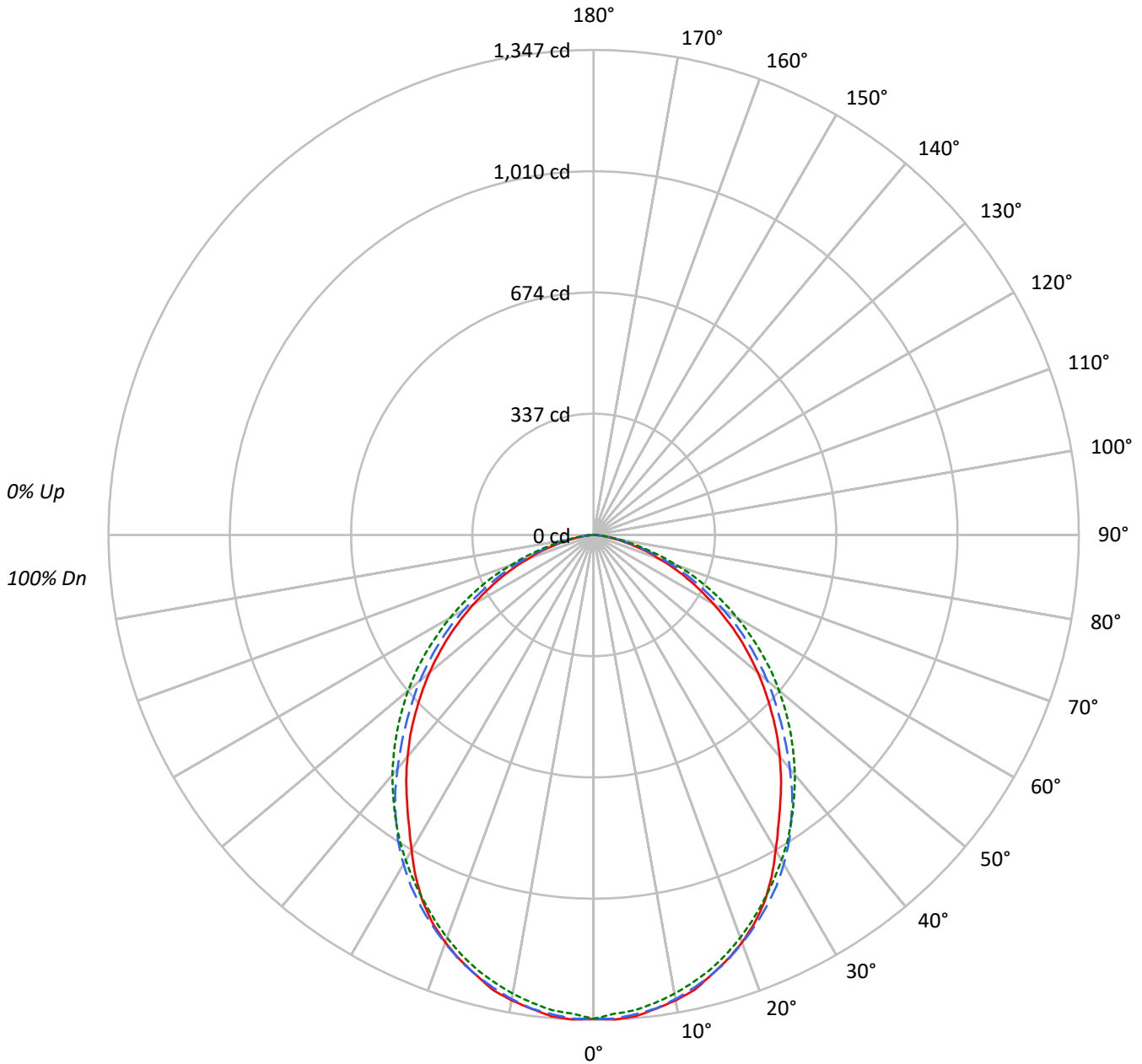
Lumens per Lamp: N/A  
Luminaire Lumens: 3107.0 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	3616	3616	3616
5°	3625	3610	3579
10°	3587	3577	3536
15°	3523	3523	3483
20°	3449	3453	3409
25°	3335	3377	3323
30°	3141	3282	3242
35°	2968	3146	3151
40°	2823	2976	3054
45°	2662	2796	2939
50°	2492	2635	2814
55°	2298	2451	2662
60°	2070	2236	2475
65°	1827	1989	2252
70°	1523	1694	1913
75°	1197	1353	1497
80°	855	951	1055
85°	559	559	525



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.5	4.1
10°-20°	355.4	11.4
20°-30°	519.4	16.7
30°-40°	589.5	19.0
40°-50°	569.1	18.3
50°-60°	469.5	15.1
60°-70°	312.6	10.1
70°-80°	139.9	4.5
80°-90°	25.0	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°	1001.3	32.2
0°-40°	1590.8	51.2
0°-60°	2629.4	84.6
0°-90°	3107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3107.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1342	1342	1336	1329	1325	127
15°	1265	1268	1265	1259	1250	357
25°	1123	1132	1137	1129	1119	514
35°	903	916	958	963	959	566
45°	700	711	735	768	772	540
55°	490	498	522	551	567	437
65°	287	295	312	334	354	285
75°	115	121	130	136	144	126
85°	18	18	18	17	17	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1343.7	1343.7	1343.7	1343.7	1343.7
2.5°	1347.3	1347.8	1344.7	1336.5	1331.3
5°	1342.1	1341.6	1336.5	1329.2	1325.1
7.5°	1327.2	1328.2	1326.7	1316.3	1310.7
10°	1312.7	1313.2	1309.1	1300.9	1294.1
12.5°	1294.1	1293.6	1287.9	1283.8	1273.0
15°	1264.7	1267.8	1264.7	1259.0	1250.3
17.5°	1236.3	1236.3	1238.4	1228.6	1221.9
20°	1204.3	1205.9	1205.9	1198.1	1190.4
22.5°	1167.2	1171.8	1173.3	1165.1	1155.8
25°	1123.3	1132.1	1137.2	1129.0	1119.1
27.5°	1070.1	1083.5	1099.0	1092.8	1082.0
30°	1010.7	1030.4	1056.2	1051.0	1043.3
32.5°	954.5	974.1	1009.7	1007.6	1003.5
35°	903.4	915.8	957.6	962.7	959.1
37.5°	854.8	866.2	905.4	917.3	914.2
40°	803.7	816.1	847.1	868.3	869.3
42.5°	753.2	765.0	790.3	820.8	820.8
45°	699.5	711.3	734.6	768.1	772.3
47.5°	646.8	659.2	681.9	715.5	722.2
50°	595.2	606.5	629.3	661.8	672.1
52.5°	541.5	553.9	576.1	606.0	621.0
55°	489.9	498.1	522.4	551.3	567.3
57.5°	436.2	443.9	471.3	496.1	512.6
60°	384.6	394.4	415.5	440.8	459.9
62.5°	335.0	345.3	363.4	385.6	407.3
65°	287.0	294.8	312.3	334.5	353.6
67.5°	240.6	247.3	264.8	280.3	300.4
70°	193.6	202.4	215.3	230.2	243.1
72.5°	155.9	159.5	170.3	181.2	194.6
75°	115.1	121.3	130.1	136.3	144.0
77.5°	82.6	86.2	91.4	96.5	103.8
80°	55.2	56.8	61.4	62.5	68.1
82.5°	33.6	34.6	35.6	36.1	38.2
85°	18.1	18.1	18.1	17.0	17.0
87.5°	10.3	10.3	8.8	7.2	5.2
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)