

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: P556661

Luminaire Tested: **FUSL-12-4-LD4-1STD-30-UNV-80-86-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: P556661  
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-80-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

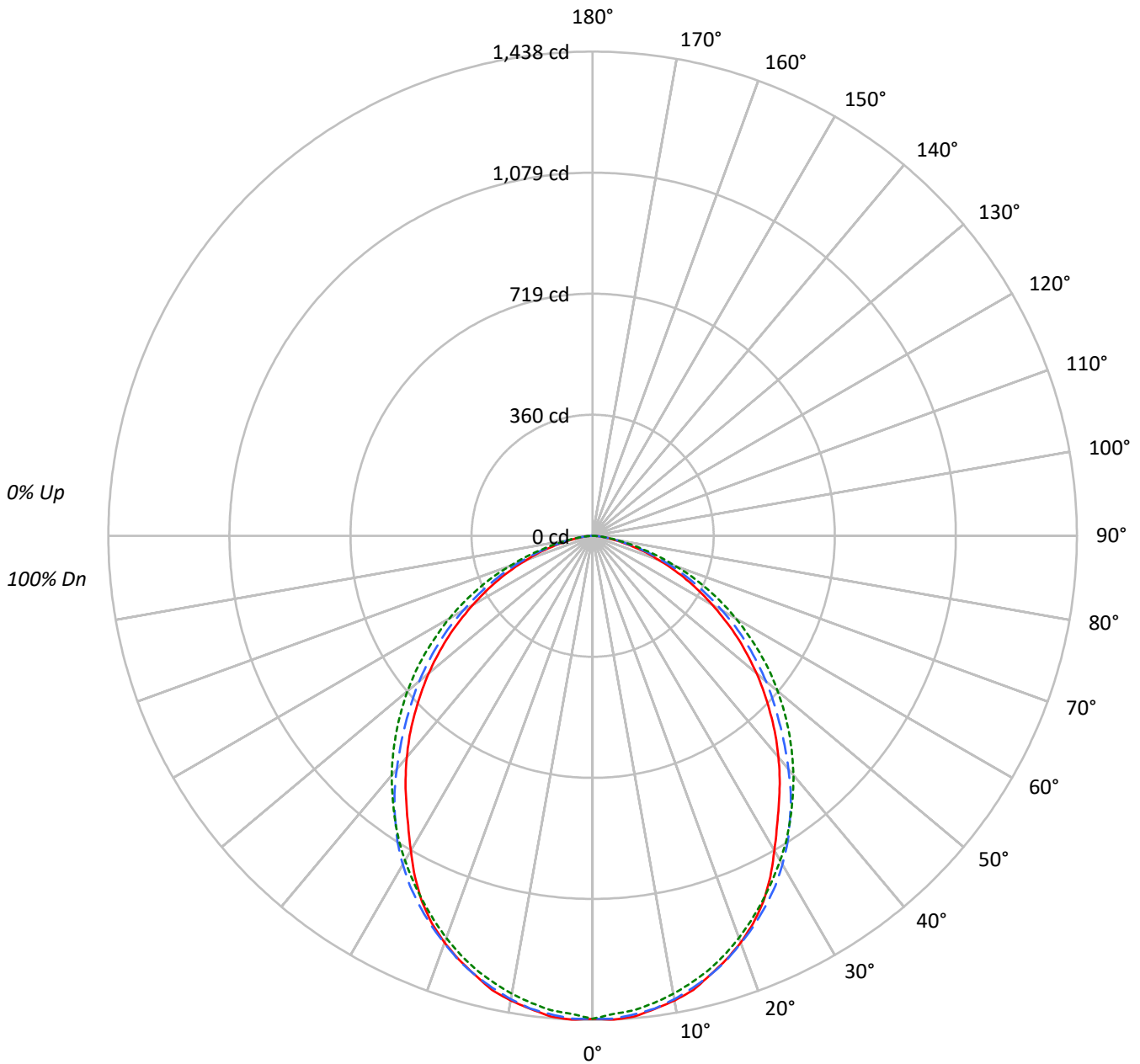
Lumens per Lamp: N/A  
Luminaire Lumens: 3317.0 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3860	3860	3860
5°	3871	3854	3821
10°	3830	3819	3775
15°	3762	3762	3719
20°	3682	3687	3639
25°	3561	3605	3548
30°	3353	3504	3461
35°	3168	3358	3364
40°	3014	3177	3260
45°	2842	2984	3137
50°	2660	2812	3004
55°	2454	2616	2842
60°	2210	2387	2643
65°	1951	2123	2404
70°	1626	1808	2043
75°	1278	1444	1599
80°	914	1017	1127
85°	596	596	562



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.1	4.1
10°-20°	379.4	11.4
20°-30°	554.5	16.7
30°-40°	629.4	19.0
40°-50°	607.6	18.3
50°-60°	501.2	15.1
60°-70°	333.8	10.1
70°-80°	149.4	4.5
80°-90°	26.7	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°	1069.0	32.2
0°-40°	1698.4	51.2
0°-60°	2807.2	84.6
0°-90°	3317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3317.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1433	1432	1427	1419	1415	136
15°	1350	1354	1350	1344	1335	381
25°	1199	1209	1214	1205	1195	549
35°	964	978	1022	1028	1024	604
45°	747	759	784	820	824	576
55°	523	532	558	589	606	467
65°	306	315	333	357	378	304
75°	123	130	139	146	154	134
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°	1434.5	1434.5	1434.5	1434.5	1434.5
2.5°	1438.4	1438.9	1435.6	1426.8	1421.3
5°	1432.9	1432.3	1426.8	1419.1	1414.7
7.5°	1416.9	1418.0	1416.3	1405.3	1399.2
10°	1401.5	1402.0	1397.6	1388.8	1381.6
12.5°	1381.6	1381.1	1375.0	1370.6	1359.0
15°	1350.2	1353.5	1350.2	1344.1	1334.8
17.5°	1319.9	1319.9	1322.1	1311.6	1304.5
20°	1285.7	1287.4	1287.4	1279.1	1270.8
22.5°	1246.0	1251.0	1252.7	1243.8	1233.9
25°	1199.2	1208.6	1214.1	1205.3	1194.8
27.5°	1142.4	1156.8	1173.3	1166.7	1155.1
30°	1079.1	1100.0	1127.6	1122.0	1113.8
32.5°	1019.0	1039.9	1078.0	1075.7	1071.3
35°	964.4	977.7	1022.3	1027.8	1023.9
37.5°	912.6	924.7	966.6	979.3	976.0
40°	858.1	871.3	904.4	927.0	928.1
42.5°	804.1	816.7	843.7	876.3	876.3
45°	746.7	759.4	784.2	820.0	824.4
47.5°	690.5	703.8	728.0	763.8	771.0
50°	635.4	647.5	671.8	706.5	717.5
52.5°	578.1	591.3	615.0	647.0	663.0
55°	523.0	531.8	557.7	588.6	605.7
57.5°	465.7	473.9	503.2	529.6	547.2
60°	410.6	421.0	443.6	470.6	491.0
62.5°	357.7	368.7	388.0	411.7	434.8
65°	306.4	314.7	333.4	357.1	377.5
67.5°	256.8	264.0	282.7	299.2	320.7
70°	206.7	216.0	229.8	245.8	259.6
72.5°	166.4	170.3	181.9	193.4	207.8
75°	122.9	129.5	138.9	145.5	153.8
77.5°	88.2	92.0	97.5	103.1	110.8
80°	59.0	60.6	65.6	66.7	72.7
82.5°	35.8	36.9	38.0	38.6	40.8
85°	19.3	19.3	19.3	18.2	18.2
87.5°	11.0	11.0	9.4	7.7	5.5
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)