

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: P556230

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-81-87-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: P556230  
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-35-UNV-81-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

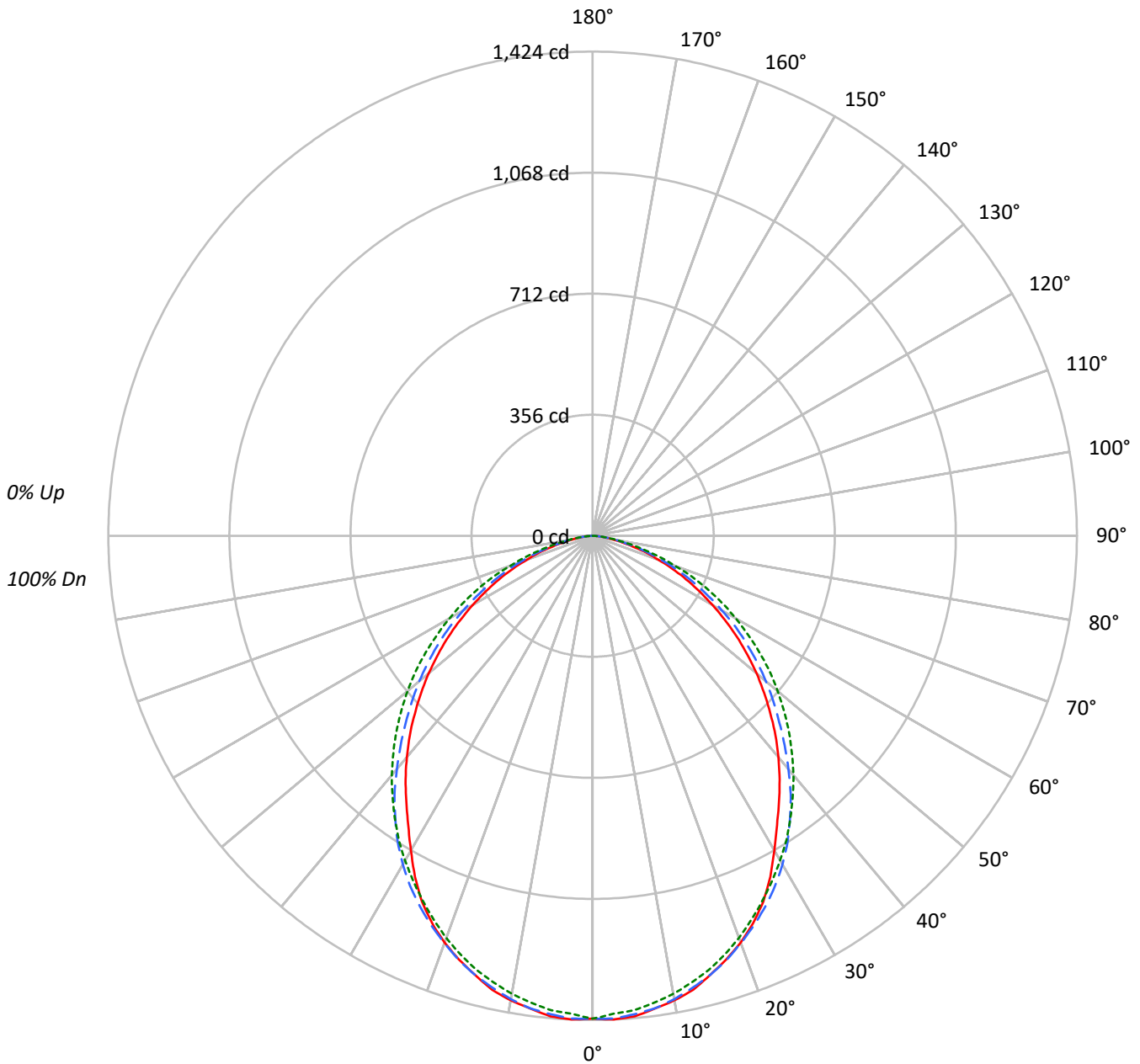
Lumens per Lamp: N/A  
Luminaire Lumens: 3284.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3822	3822	3822
5°	3832	3816	3783
10°	3791	3781	3738
15°	3724	3724	3682
20°	3645	3650	3603
25°	3525	3569	3512
30°	3320	3469	3426
35°	3137	3325	3330
40°	2984	3145	3228
45°	2813	2955	3106
50°	2634	2784	2974
55°	2429	2591	2813
60°	2188	2364	2616
65°	1932	2102	2379
70°	1610	1790	2022
75°	1265	1430	1582
80°	905	1006	1116
85°	590	590	556



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.7	4.1
10°-20°	375.7	11.4
20°-30°	549.0	16.7
30°-40°	623.1	19.0
40°-50°	601.5	18.3
50°-60°	496.2	15.1
60°-70°	330.5	10.1
70°-80°	147.9	4.5
80°-90°	26.5	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°	1058.3	32.2
0°-40°	1681.5	51.2
0°-60°	2779.2	84.6
0°-90°	3284.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3284.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1419	1418	1413	1405	1401	134
15°	1337	1340	1337	1331	1322	377
25°	1187	1196	1202	1193	1183	544
35°	955	968	1012	1018	1014	598
45°	739	752	776	812	816	570
55°	518	526	552	583	600	462
65°	303	312	330	354	374	301
75°	122	128	138	144	152	133
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°	1420.2	1420.2	1420.2	1420.2	1420.2
2.5°	1424.1	1424.6	1421.3	1412.6	1407.2
5°	1418.6	1418.1	1412.6	1405.0	1400.6
7.5°	1402.8	1403.9	1402.2	1391.3	1385.3
10°	1387.5	1388.1	1383.7	1375.0	1367.9
12.5°	1367.9	1367.3	1361.3	1357.0	1345.5
15°	1336.8	1340.0	1336.8	1330.8	1321.5
17.5°	1306.8	1306.8	1308.9	1298.6	1291.5
20°	1272.9	1274.6	1274.6	1266.4	1258.2
22.5°	1233.6	1238.6	1240.2	1231.5	1221.6
25°	1187.3	1196.5	1202.0	1193.3	1182.9
27.5°	1131.1	1145.3	1161.6	1155.1	1143.6
30°	1068.3	1089.1	1116.3	1110.9	1102.7
32.5°	1008.8	1029.6	1067.2	1065.0	1060.7
35°	954.8	967.9	1012.1	1017.6	1013.8
37.5°	903.5	915.5	957.0	969.6	966.3
40°	849.5	862.6	895.4	917.7	918.8
42.5°	796.1	808.6	835.3	867.5	867.5
45°	739.3	751.9	776.4	811.9	816.2
47.5°	683.7	696.8	720.8	756.2	763.3
50°	629.1	641.1	665.1	699.5	710.4
52.5°	572.4	585.4	608.9	640.6	656.4
55°	517.8	526.5	552.2	582.7	599.6
57.5°	461.0	469.2	498.1	524.3	541.8
60°	406.5	416.9	439.2	466.0	486.1
62.5°	354.1	365.0	384.1	407.6	430.5
65°	303.4	311.5	330.1	353.6	373.7
67.5°	254.3	261.4	279.9	296.3	317.6
70°	204.6	213.9	227.5	243.3	257.0
72.5°	164.8	168.6	180.1	191.5	205.7
75°	121.7	128.2	137.5	144.0	152.2
77.5°	87.3	91.1	96.6	102.0	109.7
80°	58.4	60.0	64.9	66.0	72.0
82.5°	35.5	36.6	37.6	38.2	40.4
85°	19.1	19.1	19.1	18.0	18.0
87.5°	10.9	10.9	9.3	7.6	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)