

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: P558289

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-82-84-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: P558289  
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-LD4-3STD-35-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

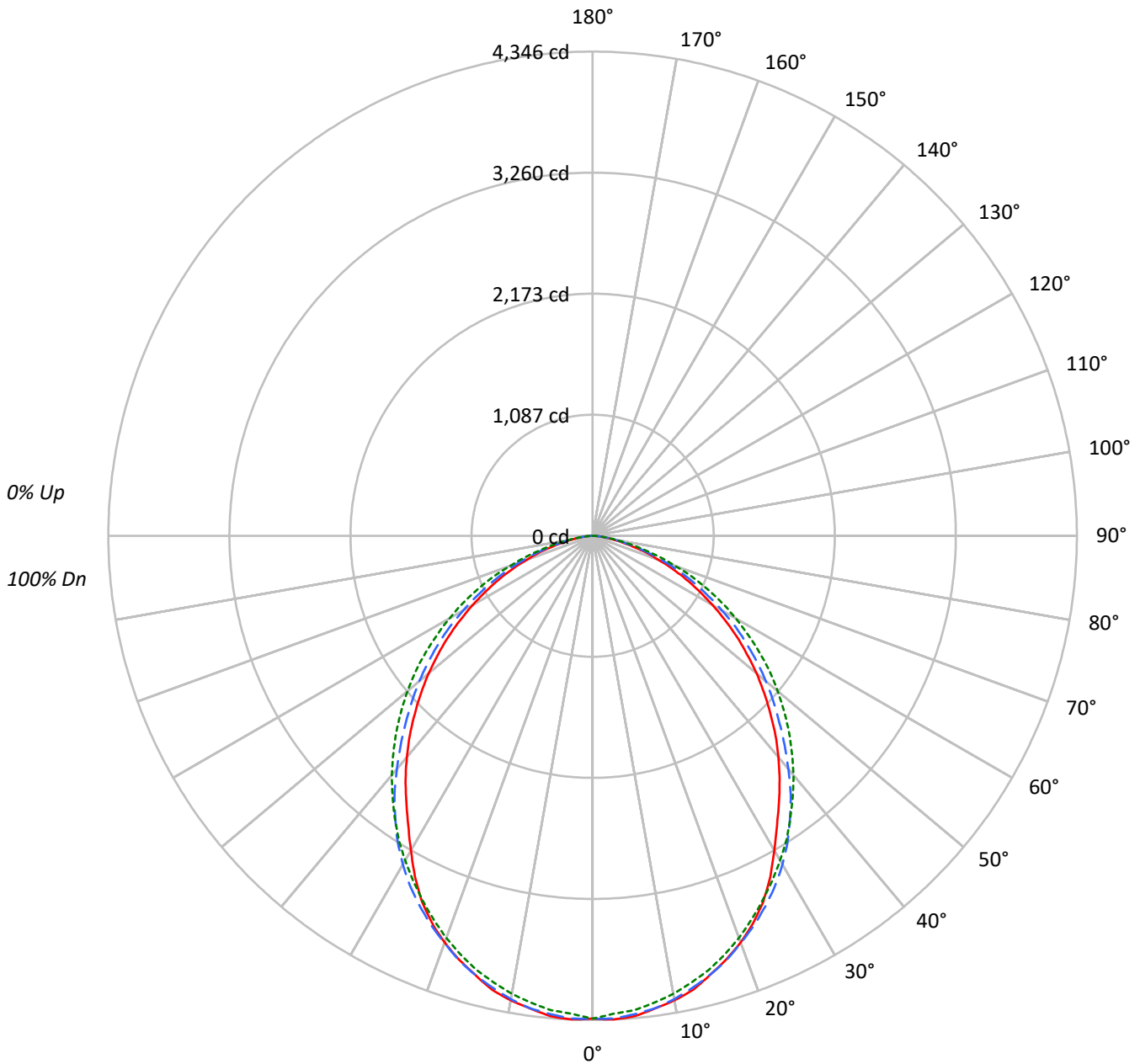
Lumens per Lamp: N/A  
Luminaire Lumens: 10022.0 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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

TEST NUMBER: P558289

CATALOG NUMBER: FUSL-12-4-LD4-3STD-35-UNV-82-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558289

CATALOG NUMBER: FUSL-12-4-LD4-3STD-35-UNV-82-84-EDD

**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°	11664	11664	11664
5°	11695	11645	11546
10°	11570	11538	11407
15°	11365	11365	11235
20°	11125	11139	10996
25°	10758	10891	10718
30°	10131	10586	10457
35°	9572	10147	10163
40°	9107	9598	9850
45°	8586	9017	9480
50°	8038	8498	9076
55°	7414	7906	8585
60°	6676	7214	7985
65°	5895	6415	7263
70°	4913	5463	6171
75°	3860	4363	4831
80°	2762	3070	3406
85°	1800	1800	1695



TEST NUMBER: P558289

CATALOG NUMBER: FUSL-12-4-LD4-3STD-35-UNV-82-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	408.1	4.1
10°-20°	1146.4	11.4
20°-30°	1675.3	16.7
30°-40°	1901.6	19.0
40°-50°	1835.7	18.3
50°-60°	1514.4	15.1
60°-70°	1008.4	10.1
70°-80°	451.3	4.5
80°-90°	80.7	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°	3229.8	32.2
0°-40°	5131.5	51.2
0°-60°	8481.6	84.6
0°-90°	10022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10022.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4334	4334	4334	4334	4334	
5°	4329	4328	4311	4288	4274	410
15°	4080	4090	4080	4061	4033	1150
25°	3623	3652	3668	3642	3610	1659
35°	2914	2954	3089	3105	3094	1826
45°	2256	2294	2369	2478	2491	1741
55°	1580	1607	1685	1778	1830	1410
65°	926	951	1007	1079	1141	918
75°	371	391	420	440	465	406
85°	58	58	58	55	55	79
90°	0	0	0	0	0	



TEST NUMBER: P558289

CATALOG NUMBER: FUSL-12-4-LD4-3STD-35-UNV-82-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4334.3	<i>4334.3</i>	4334.3	4334.3	4334.3
2.5°	<i>4345.9</i>	<i>4347.6</i>	<i>4337.6</i>	<i>4310.9</i>	<i>4294.3</i>
5°	4329.3	<i>4327.6</i>	4310.9	4287.6	4274.3
7.5°	4281.0	<i>4284.3</i>	4279.3	4246.0	4227.7
10°	4234.4	<i>4236.0</i>	4222.7	4196.1	4174.4
12.5°	4174.4	<i>4172.7</i>	4154.4	4141.1	4106.1
15°	4079.5	<i>4089.5</i>	4079.5	4061.2	4032.9
17.5°	3987.9	<i>3987.9</i>	3994.6	3962.9	3941.3
20°	3884.7	<i>3889.7</i>	3889.7	3864.7	3839.7
22.5°	3764.8	<i>3779.8</i>	3784.8	3758.1	3728.2
25°	3623.3	<i>3651.6</i>	3668.2	3641.6	3609.9
27.5°	3451.8	<i>3495.0</i>	3545.0	3525.0	3490.1
30°	3260.3	<i>3323.5</i>	3406.8	3390.1	3365.2
32.5°	3078.8	<i>3142.0</i>	3256.9	3250.3	3237.0
35°	2913.9	<i>2953.9</i>	3088.8	3105.4	3093.8
37.5°	2757.4	<i>2794.0</i>	2920.6	2958.9	2948.9
40°	2592.6	<i>2632.5</i>	2732.4	2800.7	2804.0
42.5°	2429.4	<i>2467.7</i>	2549.3	2647.5	2647.5
45°	2256.2	<i>2294.5</i>	2369.4	2477.7	2491.0
47.5°	2086.4	<i>2126.3</i>	2199.6	2307.8	2329.5
50°	1919.9	<i>1956.5</i>	2029.8	2134.7	2168.0
52.5°	1746.7	<i>1786.7</i>	1858.3	1954.8	2003.1
55°	1580.2	<i>1606.8</i>	1685.1	1778.3	1829.9
57.5°	1407.0	<i>1432.0</i>	1520.2	1600.2	1653.4
60°	1240.5	<i>1272.1</i>	1340.4	1422.0	1483.6
62.5°	1080.7	<i>1114.0</i>	1172.2	1243.8	1313.8
65°	925.8	<i>950.8</i>	1007.4	1079.0	1140.6
67.5°	775.9	<i>797.6</i>	854.2	904.1	969.1
70°	624.4	<i>652.7</i>	694.3	742.6	784.3
72.5°	502.9	<i>514.5</i>	549.5	584.5	627.7
75°	371.3	<i>391.3</i>	419.6	439.6	464.6
77.5°	266.4	<i>278.1</i>	294.7	311.4	334.7
80°	178.2	<i>183.2</i>	198.1	201.5	219.8
82.5°	108.2	<i>111.6</i>	114.9	116.6	123.2
85°	58.3	<i>58.3</i>	58.3	54.9	54.9
87.5°	33.3	<i>33.3</i>	28.3	23.3	16.7
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)