

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561720

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2STD-35-UNV-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4693.0 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

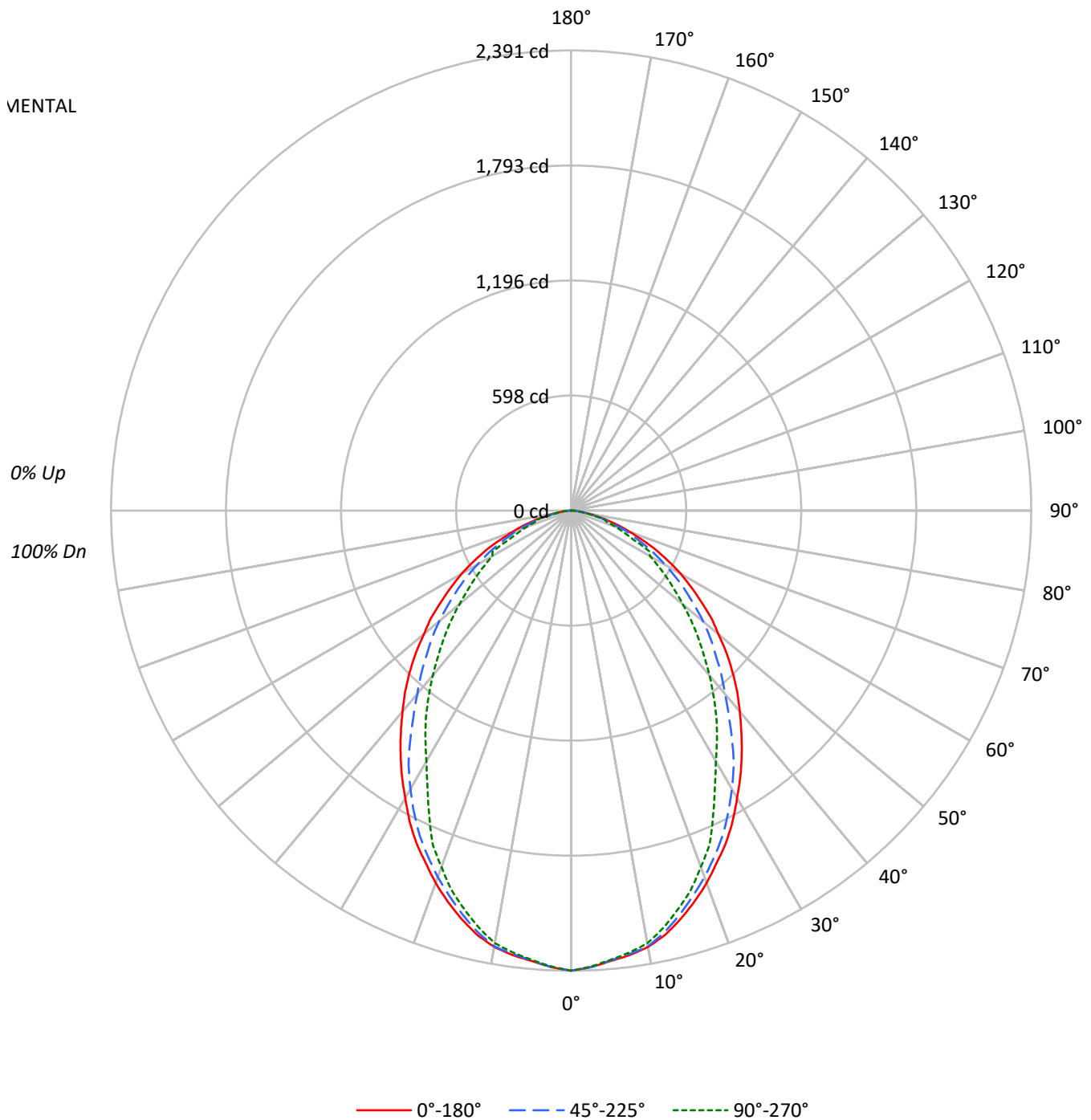
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									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	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	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6433	6433	6433
5°	6346	6338	6331
10°	6290	6283	6238
15°	6121	6059	5975
20°	5896	5801	5643
25°	5654	5531	5186
30°	5358	5187	4671
35°	5075	4794	4322
40°	4786	4369	3932
45°	4512	4039	3555
50°	4177	3749	3170
55°	3864	3397	2839
60°	3540	3034	2544
65°	3115	2657	2252
70°	2566	2327	1913
75°	2040	1781	1867
80°	1370	1285	1199
85°	852	1025	1195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4512 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.5	4.7
10°-20°	610.7	13.0
20°-30°	845.5	18.0
30°-40°	901.5	19.2
40°-50°	822.5	17.5
50°-60°	644.3	13.7
60°-70°	419.9	8.9
70°-80°	186.1	4.0
80°-90°	39.9	0.9
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°	1678.7	35.8
0°-40°	2580.3	55.0
0°-60°	4047.1	86.2
0°-90°	4693.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4693.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2391	2391	2391	2391	2391	
5°	2349	2346	2346	2344	2344	223
15°	2197	2197	2175	2153	2145	618
25°	1904	1893	1863	1796	1747	874
35°	1545	1534	1459	1349	1316	966
45°	1186	1161	1061	973	934	913
55°	824	799	724	638	605	739
65°	489	462	417	426	354	482
75°	196	182	171	163	180	210
85°	28	30	33	36	39	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2390.6	2390.6	2390.6	2390.6	2390.6
2.5°	2374.0	2374.0	2374.0	2371.2	2371.2
5°	2349.1	2346.3	2346.3	2343.6	2343.6
7.5°	2329.8	2327.0	2324.2	2321.5	2315.9
10°	2302.1	2302.1	2299.4	2285.5	2282.8
12.5°	2257.9	2255.1	2244.1	2224.7	2219.2
15°	2197.1	2197.1	2175.0	2152.9	2144.6
17.5°	2130.8	2128.0	2100.4	2078.3	2067.2
20°	2058.9	2053.4	2025.8	1989.8	1970.5
22.5°	1978.8	1978.8	1945.6	1898.6	1879.3
25°	1904.2	1893.1	1862.7	1796.4	1746.6
27.5°	1818.5	1801.9	1768.7	1674.8	1616.7
30°	1724.5	1716.2	1669.2	1547.6	1503.4
32.5°	1636.1	1622.3	1572.5	1445.4	1409.5
35°	1544.9	1533.8	1459.2	1348.7	1315.5
37.5°	1453.7	1439.9	1345.9	1257.5	1216.0
40°	1362.5	1345.9	1243.6	1163.5	1119.3
42.5°	1276.8	1254.7	1155.2	1069.5	1019.8
45°	1185.6	1160.7	1061.2	972.8	934.1
47.5°	1094.4	1072.3	981.1	889.9	845.7
50°	997.7	978.3	895.4	804.2	757.2
52.5°	917.5	887.1	807.0	715.8	677.1
55°	823.6	798.7	724.1	638.4	605.2
57.5°	737.9	713.0	643.9	563.8	536.1
60°	657.7	621.8	563.8	494.7	472.6
62.5°	569.3	541.7	491.9	433.9	461.5
65°	489.2	461.5	417.3	425.6	353.7
67.5°	400.7	386.9	348.2	309.5	298.5
70°	326.1	309.5	295.7	254.3	243.2
72.5°	259.8	243.2	223.9	201.7	193.5
75°	196.2	182.4	171.3	163.1	179.6
77.5°	135.4	129.9	121.6	113.3	110.5
80°	88.4	85.7	82.9	80.1	77.4
82.5°	52.5	52.5	52.5	52.5	52.5
85°	27.6	30.4	33.2	35.9	38.7
87.5°	16.6	16.6	19.3	22.1	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)