

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: P562997

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562997
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-24-4-LD4-2STD-50-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7769.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

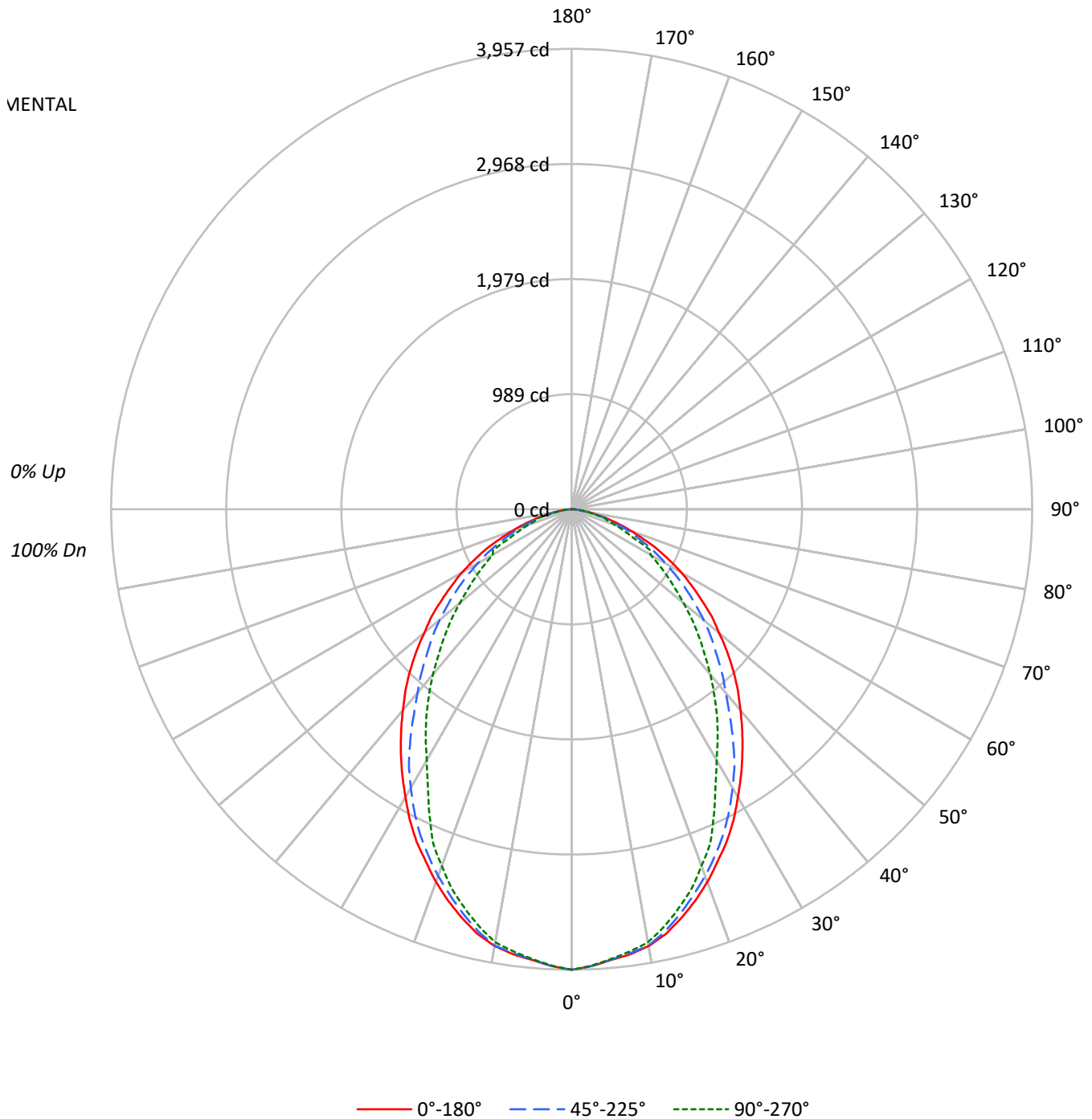
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100												100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5325	5325	5325
5°	5252	5246	5240
10°	5207	5200	5163
15°	5066	5015	4945
20°	4880	4802	4671
25°	4680	4578	4293
30°	4435	4293	3867
35°	4201	3968	3577
40°	3962	3616	3254
45°	3735	3343	2943
50°	3457	3103	2624
55°	3198	2812	2350
60°	2930	2511	2105
65°	2578	2199	1864
70°	2124	1926	1584
75°	1688	1475	1546
80°	1134	1064	993
85°	707	848	990

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3735 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.4	4.7
10°-20°	1011.0	13.0
20°-30°	1399.6	18.0
30°-40°	1492.4	19.2
40°-50°	1361.5	17.5
50°-60°	1066.7	13.7
60°-70°	695.2	8.9
70°-80°	308.0	4.0
80°-90°	66.1	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°	2779.0	35.8
0°-40°	4271.5	55.0
0°-60°	6699.7	86.2
0°-90°	7769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7769.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3957	3957	3957	3957	3957	
5°	3889	3884	3884	3880	3880	369
15°	3637	3637	3601	3564	3550	1023
25°	3152	3134	3084	2974	2891	1447
35°	2558	2539	2416	2233	2178	1599
45°	1963	1922	1757	1610	1546	1512
55°	1363	1322	1199	1057	1002	1223
65°	810	764	691	705	586	798
75°	325	302	284	270	297	348
85°	46	50	55	60	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3957.4	3957.4	3957.4	3957.4	3957.4
2.5°	3930.0	3930.0	3930.0	3925.4	3925.4
5°	3888.8	3884.2	3884.2	3879.6	3879.6
7.5°	3856.8	3852.2	3847.6	3843.0	3833.9
10°	3811.0	3811.0	3806.4	3783.6	3779.0
12.5°	3737.8	3733.2	3714.9	3682.9	3673.8
15°	3637.2	3637.2	3600.6	3564.0	3550.2
17.5°	3527.4	3522.8	3477.0	3440.4	3422.1
20°	3408.4	3399.3	3353.5	3294.0	3262.0
22.5°	3275.7	3275.7	3220.8	3143.1	3111.0
25°	3152.2	3133.9	3083.6	2973.8	2891.4
27.5°	3010.4	2982.9	2928.0	2772.5	2676.4
30°	2854.8	2841.1	2763.3	2562.0	2488.8
32.5°	2708.4	2685.6	2603.2	2392.8	2333.3
35°	2557.5	2539.2	2415.6	2232.6	2177.7
37.5°	2406.5	2383.6	2228.1	2081.7	2013.0
40°	2255.5	2228.1	2058.8	1926.1	1852.9
42.5°	2113.7	2077.1	1912.4	1770.5	1688.2
45°	1962.7	1921.5	1756.8	1610.4	1546.4
47.5°	1811.7	1775.1	1624.1	1473.2	1400.0
50°	1651.6	1619.6	1482.3	1331.3	1253.6
52.5°	1518.9	1468.6	1335.9	1184.9	1120.9
55°	1363.4	1322.2	1198.7	1056.8	1001.9
57.5°	1221.5	1180.4	1066.0	933.3	887.6
60°	1088.9	1029.4	933.3	818.9	782.3
62.5°	942.5	896.7	814.4	718.3	764.0
65°	809.8	764.0	690.8	704.6	585.6
67.5°	663.4	640.5	576.5	512.4	494.1
70°	539.9	512.4	489.5	420.9	402.6
72.5°	430.1	402.6	370.6	334.0	320.3
75°	324.8	302.0	283.7	269.9	297.4
77.5°	224.2	215.0	201.3	187.6	183.0
80°	146.4	141.8	137.3	132.7	128.1
82.5°	86.9	86.9	86.9	86.9	86.9
85°	45.8	50.3	54.9	59.5	64.1
87.5°	27.5	27.5	32.0	36.6	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)