

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: P564144

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564144
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-LD4-4STD-50-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13949.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

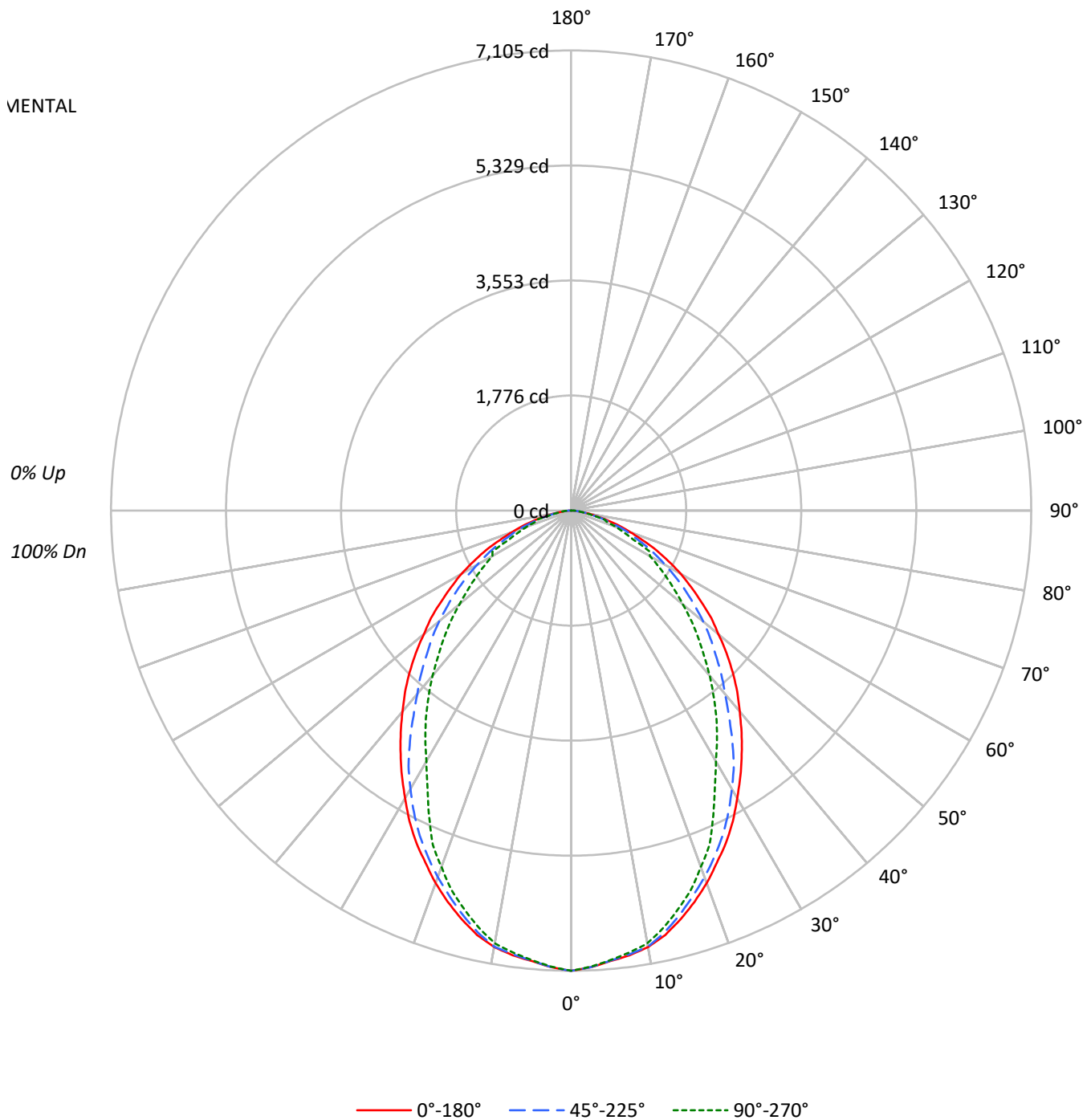
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	9560	9560	9560
5°	9430	9419	9408
10°	9349	9337	9270
15°	9097	9005	8879
20°	8762	8621	8386
25°	8402	8219	7707
30°	7964	7708	6943
35°	7542	7124	6422
40°	7113	6493	5843
45°	6706	6002	5283
50°	6207	5571	4711
55°	5742	5049	4220
60°	5261	4509	3780
65°	4629	3949	3347
70°	3813	3458	2844
75°	3032	2648	2776
80°	2037	1909	1782
85°	1267	1522	1775

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6706 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	661.4	4.7
10°-20°	1815.2	13.0
20°-30°	2513.0	18.0
30°-40°	2679.6	19.2
40°-50°	2444.6	17.5
50°-60°	1915.1	13.7
60°-70°	1248.2	8.9
70°-80°	553.0	4.0
80°-90°	118.7	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°	4989.7	35.8
0°-40°	7669.3	55.0
0°-60°	12029.1	86.2
0°-90°	13949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7105	7105	7105	7105	7105	
5°	6982	6974	6974	6966	6966	663
15°	6530	6530	6465	6399	6374	1836
25°	5660	5627	5536	5339	5192	2598
35°	4592	4559	4337	4009	3910	2871
45°	3524	3450	3154	2892	2776	2714
55°	2448	2374	2152	1898	1799	2196
65°	1454	1372	1240	1265	1051	1433
75°	583	542	509	485	534	625
85°	82	90	99	107	115	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7105.4	7105.4	7105.4	7105.4	7105.4
2.5°	7056.1	7056.1	7056.1	7047.9	7047.9
5°	6982.2	6974.0	6974.0	6965.8	6965.8
7.5°	6924.7	6916.5	6908.3	6900.1	6883.6
10°	6842.6	6842.6	6834.4	6793.3	6785.1
12.5°	6711.1	6702.9	6670.1	6612.6	6596.1
15°	6530.4	6530.4	6464.7	6399.0	6374.4
17.5°	6333.3	6325.1	6242.9	6177.2	6144.4
20°	6119.7	6103.3	6021.1	5914.3	5856.8
22.5°	5881.5	5881.5	5782.9	5643.3	5585.8
25°	5659.7	5626.8	5536.5	5339.3	5191.5
27.5°	5405.1	5355.8	5257.2	4977.9	4805.4
30°	5125.8	5101.1	4961.5	4600.0	4468.6
32.5°	4862.9	4821.8	4674.0	4296.1	4189.3
35°	4591.8	4559.0	4337.2	4008.6	3910.0
37.5°	4320.8	4279.7	4000.4	3737.5	3614.3
40°	4049.7	4000.4	3696.5	3458.3	3326.8
42.5°	3795.0	3729.3	3433.6	3179.0	3031.1
45°	3524.0	3450.0	3154.3	2891.5	2776.5
47.5°	3252.9	3187.2	2916.1	2645.0	2513.6
50°	2965.4	2907.9	2661.5	2390.4	2250.7
52.5°	2727.2	2636.8	2398.6	2127.5	2012.5
55°	2447.9	2374.0	2152.2	1897.5	1798.9
57.5°	2193.2	2119.3	1913.9	1675.7	1593.6
60°	1955.0	1848.2	1675.7	1470.4	1404.7
62.5°	1692.2	1610.0	1462.2	1289.7	1371.8
65°	1453.9	1371.8	1240.4	1265.0	1051.4
67.5°	1191.1	1150.0	1035.0	920.0	887.2
70°	969.3	920.0	878.9	755.7	722.9
72.5°	772.2	722.9	665.4	599.6	575.0
75°	583.2	542.1	509.3	484.6	533.9
77.5°	402.5	386.1	361.4	336.8	328.6
80°	262.9	254.6	246.4	238.2	230.0
82.5°	156.1	156.1	156.1	156.1	156.1
85°	82.1	90.4	98.6	106.8	115.0
87.5°	49.3	49.3	57.5	65.7	73.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)