

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: P563961

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563961
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-LD4-4LO-50-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10109.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

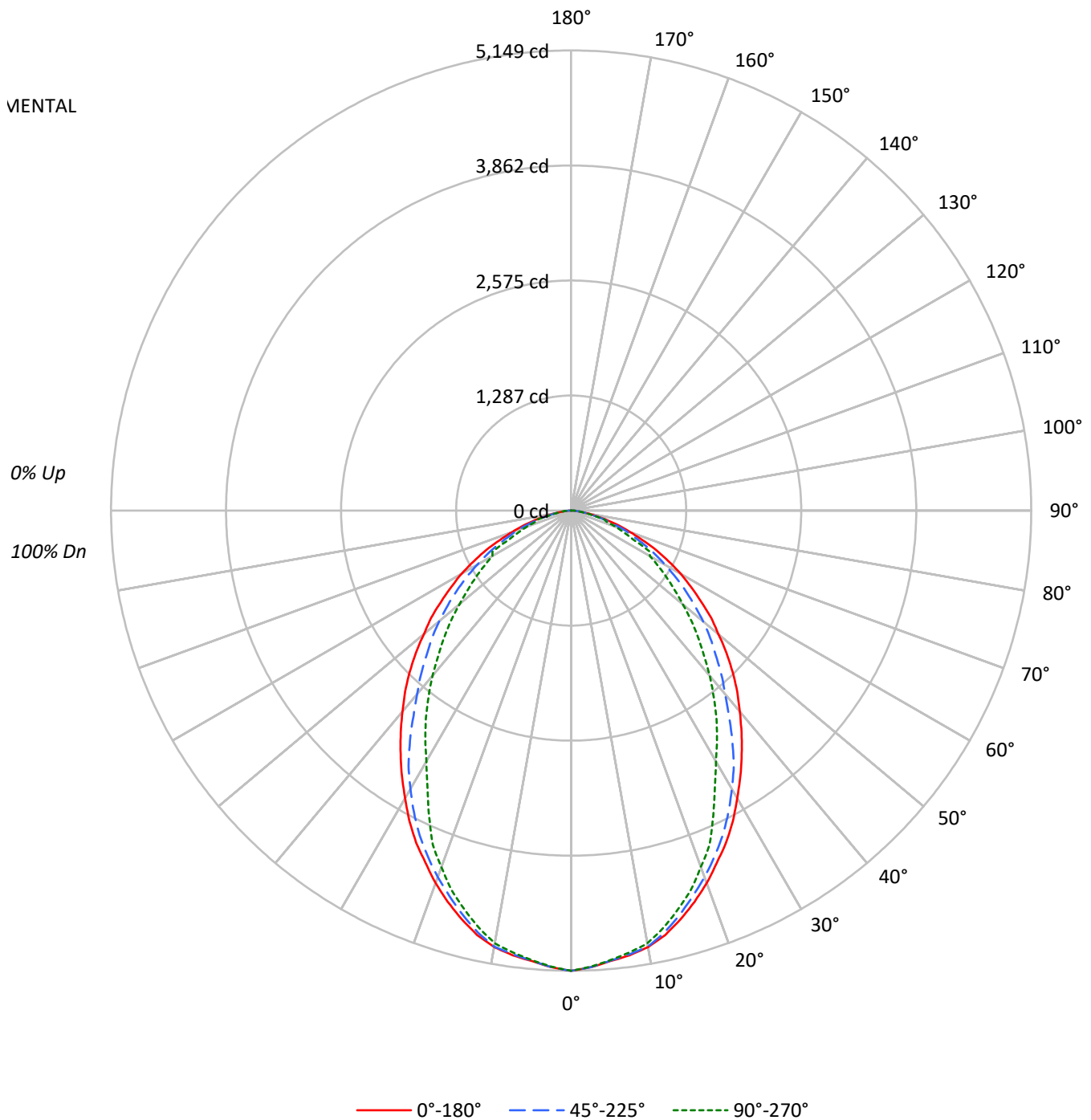
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6928	6928	6928
5°	6834	6826	6818
10°	6775	6767	6718
15°	6592	6526	6435
20°	6350	6248	6077
25°	6089	5957	5585
30°	5771	5586	5031
35°	5466	5163	4654
40°	5155	4705	4235
45°	4860	4350	3829
50°	4499	4037	3414
55°	4161	3659	3058
60°	3813	3268	2739
65°	3355	2862	2426
70°	2764	2506	2061
75°	2197	1919	2011
80°	1476	1384	1292
85°	919	1102	1286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4860 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	479.3	4.7
10°-20°	1315.5	13.0
20°-30°	1821.2	18.0
30°-40°	1942.0	19.2
40°-50°	1771.6	17.5
50°-60°	1387.9	13.7
60°-70°	904.6	8.9
70°-80°	400.8	4.0
80°-90°	86.0	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°	3616.1	35.8
0°-40°	5558.0	55.0
0°-60°	8717.6	86.2
0°-90°	10109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5149	5149	5149	5149	5149	
5°	5060	5054	5054	5048	5048	480
15°	4733	4733	4685	4637	4620	1330
25°	4102	4078	4012	3870	3762	1883
35°	3328	3304	3143	2905	2834	2080
45°	2554	2500	2286	2096	2012	1967
55°	1774	1720	1560	1375	1304	1591
65°	1054	994	899	917	762	1038
75°	423	393	369	351	387	453
85°	60	66	71	77	83	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5149.4	5149.4	5149.4	5149.4	5149.4
2.5°	5113.7	5113.7	5113.7	5107.7	5107.7
5°	5060.1	5054.1	5054.1	5048.2	5048.2
7.5°	5018.4	5012.5	5006.5	5000.6	4988.7
10°	4958.9	4958.9	4952.9	4923.2	4917.2
12.5°	4863.6	4857.7	4833.9	4792.2	4780.3
15°	4732.7	4732.7	4685.1	4637.4	4619.6
17.5°	4589.8	4583.8	4524.3	4476.7	4452.9
20°	4435.0	4423.1	4363.6	4286.2	4244.5
22.5°	4262.4	4262.4	4190.9	4089.7	4048.1
25°	4101.7	4077.8	4012.4	3869.5	3762.3
27.5°	3917.1	3881.4	3810.0	3607.5	3482.5
30°	3714.7	3696.8	3595.6	3333.7	3238.5
32.5°	3524.2	3494.4	3387.3	3113.4	3036.1
35°	3327.8	3303.9	3143.2	2905.1	2833.7
37.5°	3131.3	3101.5	2899.1	2708.6	2619.3
40°	2934.9	2899.1	2678.9	2506.2	2411.0
42.5°	2750.3	2702.7	2488.4	2303.8	2196.7
45°	2553.9	2500.3	2286.0	2095.5	2012.1
47.5°	2357.4	2309.8	2113.3	1916.9	1821.6
50°	2149.1	2107.4	1928.8	1732.3	1631.1
52.5°	1976.4	1910.9	1738.3	1541.8	1458.5
55°	1774.0	1720.4	1559.7	1375.2	1303.7
57.5°	1589.5	1535.9	1387.1	1214.4	1154.9
60°	1416.8	1339.4	1214.4	1065.6	1018.0
62.5°	1226.3	1166.8	1059.6	934.6	994.2
65°	1053.7	994.2	898.9	916.8	762.0
67.5°	863.2	833.4	750.1	666.7	642.9
70°	702.5	666.7	637.0	547.7	523.9
72.5°	559.6	523.9	482.2	434.6	416.7
75°	422.7	392.9	369.1	351.2	386.9
77.5°	291.7	279.8	261.9	244.1	238.1
80°	190.5	184.5	178.6	172.6	166.7
82.5°	113.1	113.1	113.1	113.1	113.1
85°	59.5	65.5	71.4	77.4	83.3
87.5°	35.7	35.7	41.7	47.6	53.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)