

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: P563490

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563490
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-LD4-3STD-35-UNV-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9621.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

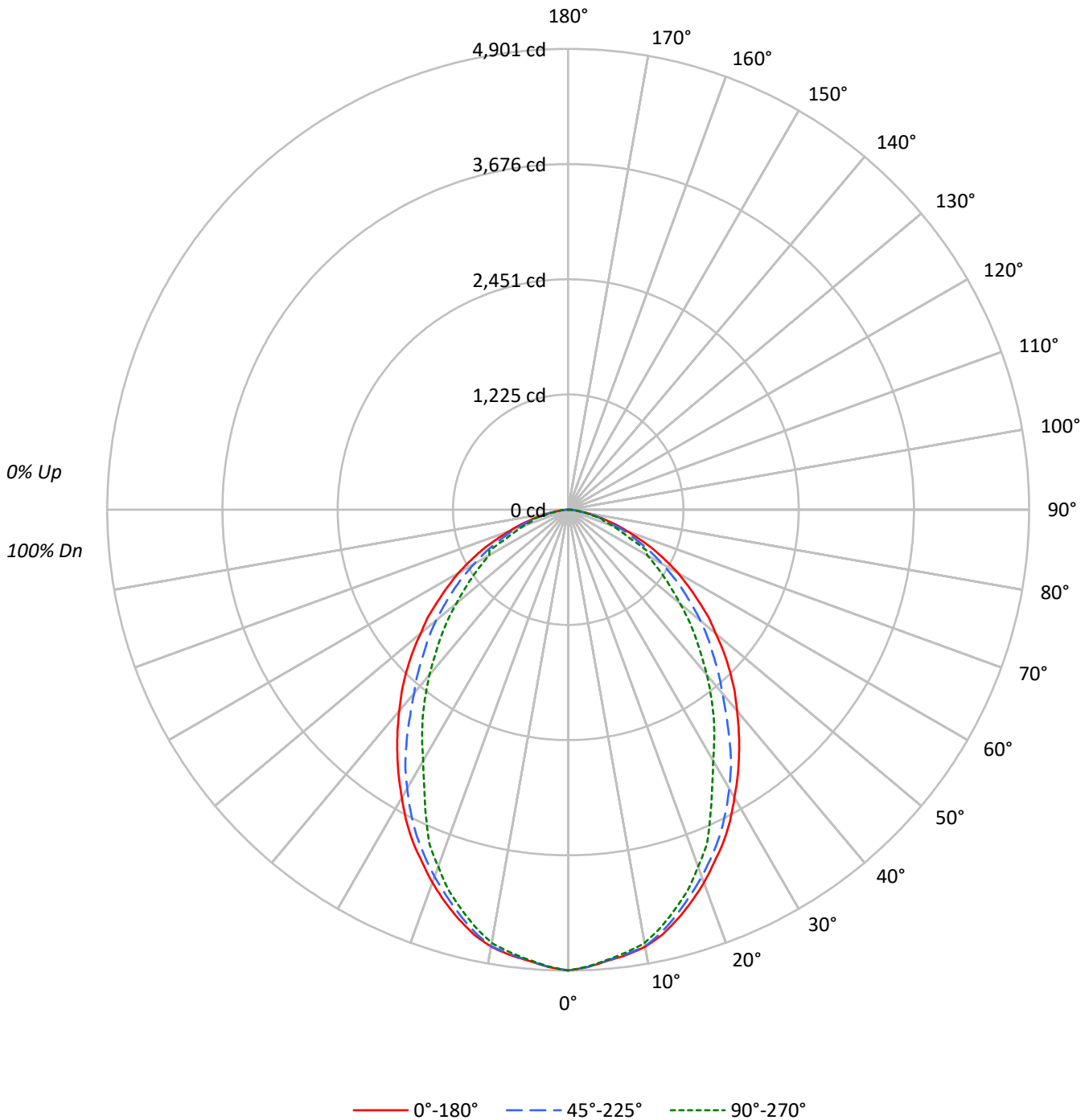
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	6594	6594	6594
5°	6504	6497	6489
10°	6448	6440	6394
15°	6274	6211	6124
20°	6044	5946	5784
25°	5795	5669	5316
30°	5493	5317	4788
35°	5202	4914	4430
40°	4906	4478	4030
45°	4625	4140	3644
50°	4281	3843	3249
55°	3961	3482	2911
60°	3629	3110	2607
65°	3193	2724	2309
70°	2630	2385	1961
75°	2091	1826	1915
80°	1405	1317	1229
85°	875	1050	1224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4625 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	456.2	4.7
10°-20°	1252.0	13.0
20°-30°	1733.3	18.0
30°-40°	1848.2	19.2
40°-50°	1686.1	17.5
50°-60°	1320.9	13.7
60°-70°	860.9	8.9
70°-80°	381.4	4.0
80°-90°	81.9	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°	3441.5	35.8
0°-40°	5289.7	55.0
0°-60°	8296.8	86.2
0°-90°	9621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4901	4901	4901	4901	4901	
5°	4816	4810	4810	4804	4804	457
15°	4504	4504	4459	4414	4397	1266
25°	3904	3881	3819	3683	3581	1792
35°	3167	3144	2992	2765	2697	1980
45°	2431	2380	2176	1994	1915	1872
55°	1688	1637	1484	1309	1241	1514
65°	1003	946	856	872	725	988
75°	402	374	351	334	368	431
85°	57	62	68	74	79	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4900.8	4900.8	4900.8	4900.8	4900.8
2.5°	4866.8	4866.8	4866.8	4861.1	4861.1
5°	4815.8	4810.2	4810.2	4804.5	4804.5
7.5°	4776.2	4770.5	4764.8	4759.2	4747.8
10°	4719.5	4719.5	4713.8	4685.5	4679.8
12.5°	4628.9	4623.2	4600.5	4560.9	4549.5
15°	4504.2	4504.2	4458.9	4413.6	4396.6
17.5°	4368.2	4362.6	4305.9	4260.6	4237.9
20°	4220.9	4209.6	4152.9	4079.3	4039.6
22.5°	4056.6	4056.6	3988.6	3892.3	3852.7
25°	3903.7	3881.0	3818.7	3682.7	3580.7
27.5°	3728.0	3694.0	3626.0	3433.4	3314.4
30°	3535.4	3518.4	3422.1	3172.8	3082.1
32.5°	3354.1	3325.8	3223.8	2963.1	2889.5
35°	3167.1	3144.4	2991.5	2764.8	2696.9
37.5°	2980.1	2951.8	2759.2	2577.9	2492.9
40°	2793.2	2759.2	2549.6	2385.2	2294.6
42.5°	2617.5	2572.2	2368.3	2192.6	2090.6
45°	2430.6	2379.6	2175.6	1994.3	1915.0
47.5°	2243.6	2198.3	2011.3	1824.3	1733.7
50°	2045.3	2005.6	1835.7	1648.7	1552.4
52.5°	1881.0	1818.7	1654.4	1467.4	1388.1
55°	1688.4	1637.4	1484.4	1308.8	1240.8
57.5°	1512.7	1461.7	1320.1	1155.8	1099.1
60°	1348.4	1274.8	1155.8	1014.2	968.8
62.5°	1167.1	1110.5	1008.5	889.5	946.2
65°	1002.8	946.2	855.5	872.5	725.2
67.5°	821.5	793.2	713.9	634.6	611.9
70°	668.5	634.6	606.2	521.2	498.6
72.5°	532.6	498.6	458.9	413.6	396.6
75°	402.3	373.9	351.3	334.3	368.3
77.5°	277.6	266.3	249.3	232.3	226.6
80°	181.3	175.6	170.0	164.3	158.6
82.5°	107.6	107.6	107.6	107.6	107.6
85°	56.7	62.3	68.0	73.7	79.3
87.5°	34.0	34.0	39.7	45.3	51.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)