

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: P563979

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563979
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-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11400.0 lumens
Efficiency: N/A
Efficacy: 121.8 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

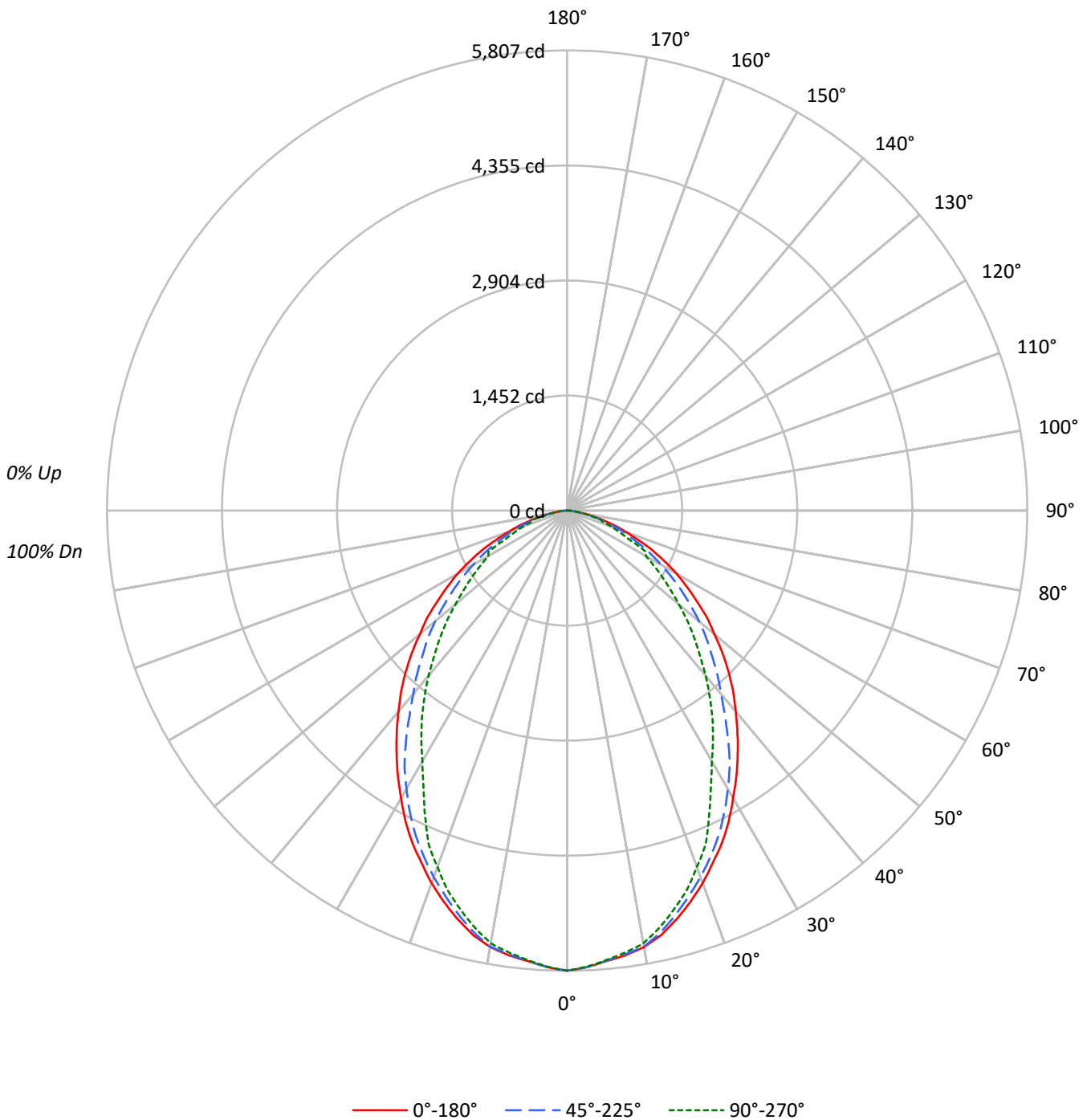
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	7813	7813	7813
5°	7707	7698	7689
10°	7640	7631	7576
15°	7434	7360	7257
20°	7161	7046	6854
25°	6867	6717	6299
30°	6508	6300	5674
35°	6164	5822	5249
40°	5813	5306	4776
45°	5480	4905	4318
50°	5073	4553	3850
55°	4693	4126	3449
60°	4300	3685	3089
65°	3783	3227	2736
70°	3116	2826	2324
75°	2478	2164	2269
80°	1664	1561	1457
85°	1036	1244	1451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5480 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	540.6	4.7
10°-20°	1483.5	13.0
20°-30°	2053.8	18.0
30°-40°	2190.0	19.2
40°-50°	1997.9	17.5
50°-60°	1565.2	13.7
60°-70°	1020.1	8.9
70°-80°	452.0	4.0
80°-90°	97.0	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°	4077.9	35.8
0°-40°	6267.8	55.0
0°-60°	9830.9	86.2
0°-90°	11400.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11400.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5807	5807	5807	5807	5807	
5°	5706	5700	5700	5693	5693	542
15°	5337	5337	5283	5230	5210	1500
25°	4626	4599	4525	4364	4243	2124
35°	3753	3726	3545	3276	3196	2346
45°	2880	2820	2578	2363	2269	2218
55°	2001	1940	1759	1551	1470	1794
65°	1188	1121	1014	1034	859	1171
75°	477	443	416	396	436	511
85°	67	74	81	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5807.0	5807.0	5807.0	5807.0	5807.0
2.5°	5766.7	5766.7	5766.7	5760.0	5760.0
5°	5706.3	5699.6	5699.6	5692.9	5692.9
7.5°	5659.3	5652.6	5645.9	5639.2	5625.7
10°	5592.2	5592.2	5585.5	5551.9	5545.2
12.5°	5484.8	5478.1	5451.2	5404.2	5390.8
15°	5337.1	5337.1	5283.4	5229.7	5209.5
17.5°	5176.0	5169.2	5102.1	5048.4	5021.6
20°	5001.4	4988.0	4920.9	4833.6	4786.6
22.5°	4806.7	4806.7	4726.2	4612.0	4565.0
25°	4625.5	4598.6	4524.8	4363.6	4242.8
27.5°	4417.4	4377.1	4296.5	4068.3	3927.3
30°	4189.1	4169.0	4054.8	3759.5	3652.0
32.5°	3974.3	3940.7	3819.9	3511.1	3423.8
35°	3752.7	3725.9	3544.6	3276.1	3195.5
37.5°	3531.2	3497.6	3269.4	3054.6	2953.9
40°	3309.7	3269.4	3021.0	2826.3	2718.9
42.5°	3101.5	3047.8	2806.2	2598.0	2477.2
45°	2880.0	2819.6	2577.9	2363.1	2269.1
47.5°	2658.5	2604.8	2383.2	2161.7	2054.3
50°	2423.5	2376.5	2175.1	1953.6	1839.4
52.5°	2228.8	2155.0	1960.3	1738.7	1644.8
55°	2000.6	1940.1	1758.9	1550.8	1470.2
57.5°	1792.5	1732.0	1564.2	1369.5	1302.4
60°	1597.8	1510.5	1369.5	1201.7	1148.0
62.5°	1382.9	1315.8	1195.0	1054.0	1121.1
65°	1188.3	1121.1	1013.7	1033.8	859.3
67.5°	973.4	939.9	845.9	751.9	725.0
70°	792.2	751.9	718.3	617.6	590.8
72.5°	631.1	590.8	543.8	490.1	469.9
75°	476.6	443.1	416.2	396.1	436.4
77.5°	329.0	315.5	295.4	275.2	268.5
80°	214.8	208.1	201.4	194.7	188.0
82.5°	127.6	127.6	127.6	127.6	127.6
85°	67.1	73.8	80.6	87.3	94.0
87.5°	40.3	40.3	47.0	53.7	60.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)