

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: P563889

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563889
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-40-UNV-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11773.0 lumens
Efficiency: N/A
Efficacy: 125.8 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

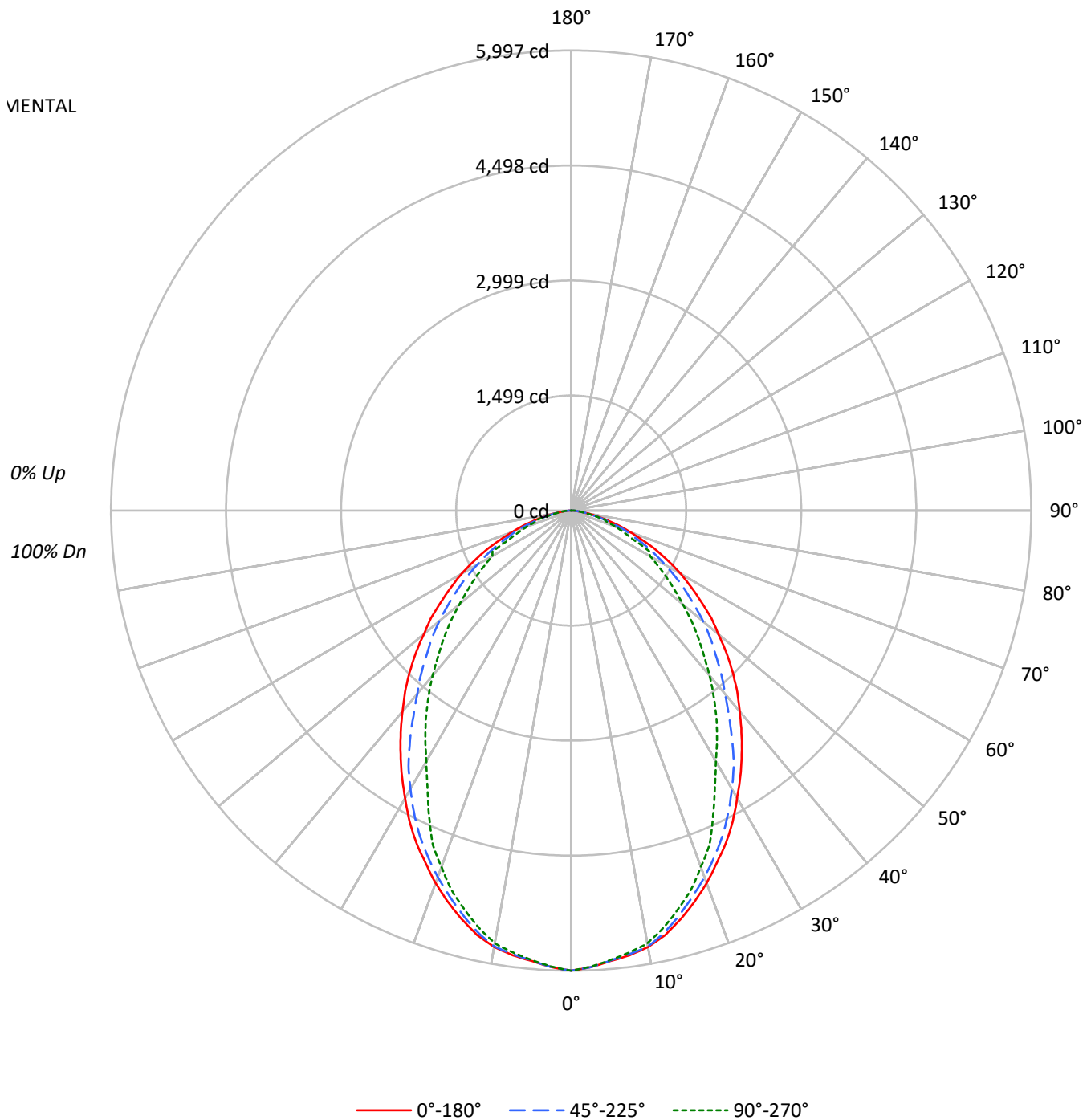
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8069	8069	8069
5°	7959	7950	7940
10°	7890	7881	7824
15°	7678	7600	7494
20°	7396	7276	7078
25°	7092	6937	6505
30°	6721	6506	5860
35°	6366	6013	5421
40°	6003	5480	4932
45°	5659	5066	4459
50°	5239	4702	3976
55°	4846	4261	3562
60°	4440	3806	3190
65°	3907	3333	2825
70°	3218	2918	2400
75°	2559	2234	2342
80°	1719	1612	1504
85°	1070	1284	1499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5659 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	558.2	4.7
10°-20°	1532.0	13.0
20°-30°	2121.0	18.0
30°-40°	2261.6	19.2
40°-50°	2063.3	17.5
50°-60°	1616.4	13.7
60°-70°	1053.5	8.9
70°-80°	466.7	4.0
80°-90°	100.2	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°	4211.3	35.8
0°-40°	6472.9	55.0
0°-60°	10152.6	86.2
0°-90°	11773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11773.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5997	5997	5997	5997	5997	
5°	5893	5886	5886	5879	5879	559
15°	5512	5512	5456	5401	5380	1549
25°	4777	4749	4673	4506	4382	2193
35°	3876	3848	3661	3383	3300	2423
45°	2974	2912	2662	2440	2343	2291
55°	2066	2004	1816	1602	1518	1853
65°	1227	1158	1047	1068	887	1209
75°	492	458	430	409	451	528
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5997.0	5997.0	5997.0	5997.0	5997.0
2.5°	5955.4	5955.4	5955.4	5948.5	5948.5
5°	5893.0	5886.1	5886.1	5879.1	5879.1
7.5°	5844.5	5837.6	5830.6	5823.7	5809.8
10°	5775.2	5775.2	5768.2	5733.6	5726.6
12.5°	5664.2	5657.3	5629.6	5581.0	5567.2
15°	5511.7	5511.7	5456.2	5400.8	5380.0
17.5°	5345.3	5338.4	5269.0	5213.6	5185.9
20°	5165.1	5151.2	5081.9	4991.7	4943.2
22.5°	4964.0	4964.0	4880.8	4762.9	4714.4
25°	4776.8	4749.1	4672.8	4506.4	4381.6
27.5°	4561.9	4520.3	4437.1	4201.4	4055.8
30°	4326.2	4305.4	4187.5	3882.5	3771.5
32.5°	4104.3	4069.6	3944.9	3625.9	3535.8
35°	3875.5	3847.8	3660.6	3383.3	3300.1
37.5°	3646.7	3612.1	3376.4	3154.5	3050.5
40°	3417.9	3376.4	3119.8	2918.8	2807.8
42.5°	3203.0	3147.6	2898.0	2683.1	2558.3
45°	2974.2	2911.8	2662.3	2440.4	2343.3
47.5°	2745.5	2690.0	2461.2	2232.4	2121.5
50°	2502.8	2454.3	2246.3	2017.5	1899.6
52.5°	2301.7	2225.5	2024.4	1795.6	1698.6
55°	2066.0	2003.6	1816.4	1601.5	1518.3
57.5°	1851.1	1788.7	1615.4	1414.3	1345.0
60°	1650.0	1559.9	1414.3	1241.0	1185.5
62.5°	1428.2	1358.9	1234.1	1088.5	1157.8
65°	1227.1	1157.8	1046.9	1067.7	887.4
67.5°	1005.3	970.6	873.6	776.5	748.8
70°	818.1	776.5	741.8	637.8	610.1
72.5°	651.7	610.1	561.6	506.1	485.3
75°	492.2	457.6	429.8	409.0	450.6
77.5°	339.7	325.8	305.1	284.3	277.3
80°	221.9	214.9	208.0	201.1	194.1
82.5°	131.7	131.7	131.7	131.7	131.7
85°	69.3	76.3	83.2	90.1	97.1
87.5°	41.6	41.6	48.5	55.5	62.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)