

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: P563450

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563450
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-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9819.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

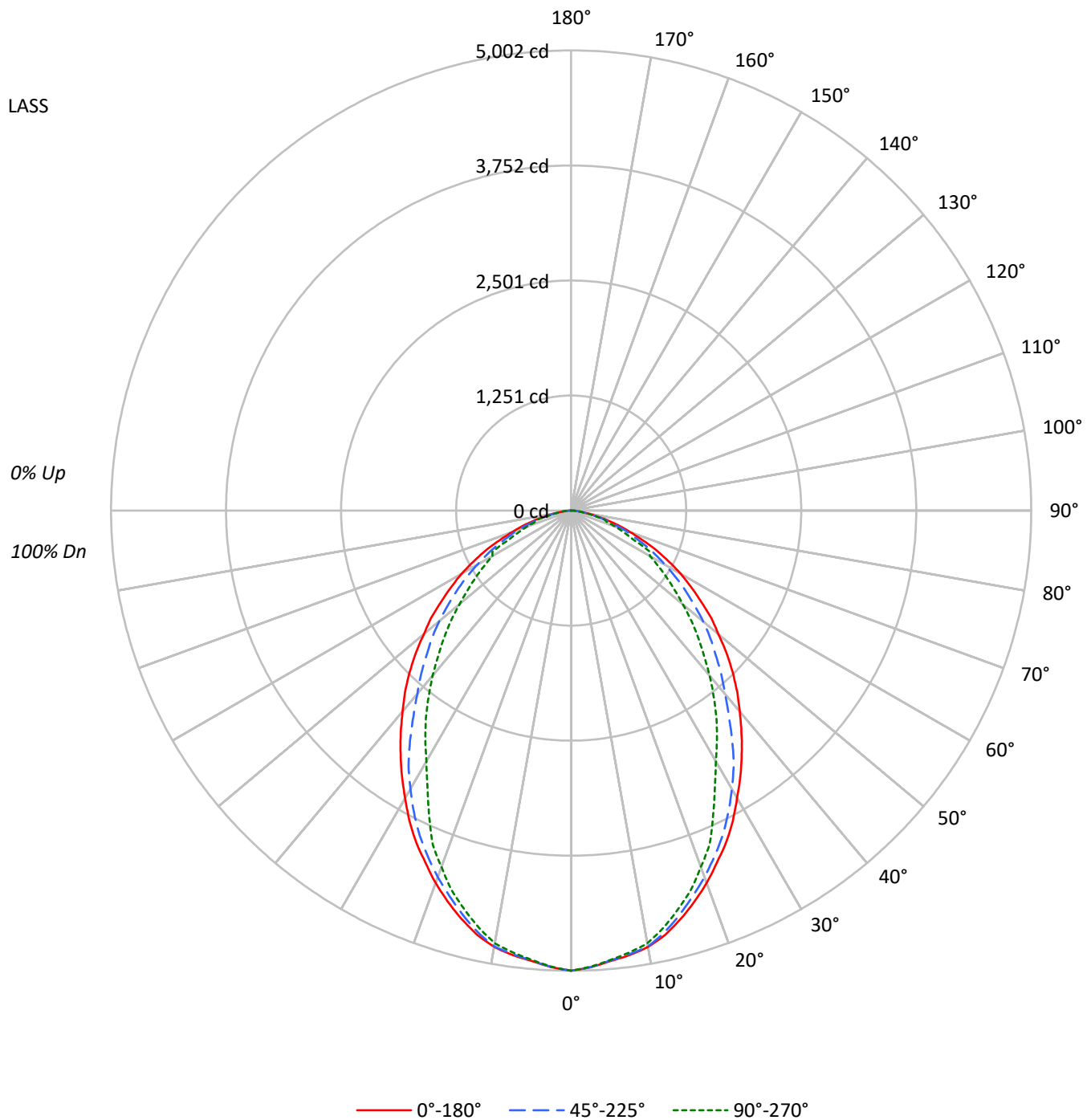
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6730	6730	6730
5°	6638	6631	6623
10°	6581	6573	6525
15°	6403	6339	6250
20°	6168	6069	5903
25°	5915	5786	5425
30°	5606	5426	4887
35°	5309	5015	4521
40°	5007	4570	4113
45°	4720	4225	3719
50°	4369	3922	3316
55°	4042	3554	2970
60°	3703	3174	2661
65°	3259	2780	2356
70°	2684	2434	2002
75°	2134	1864	1954
80°	1433	1344	1254
85°	892	1071	1250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4720 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	465.6	4.7
10°-20°	1277.8	13.0
20°-30°	1769.0	18.0
30°-40°	1886.3	19.2
40°-50°	1720.8	17.5
50°-60°	1348.1	13.7
60°-70°	878.6	8.9
70°-80°	389.3	4.0
80°-90°	83.6	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°	3512.3	35.8
0°-40°	5398.6	55.0
0°-60°	8467.5	86.2
0°-90°	9819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5002	5002	5002	5002	5002	
5°	4915	4909	4909	4903	4903	467
15°	4597	4597	4551	4504	4487	1292
25°	3984	3961	3897	3758	3654	1829
35°	3232	3209	3053	2822	2752	2021
45°	2481	2429	2220	2035	1954	1911
55°	1723	1671	1515	1336	1266	1546
65°	1024	966	873	890	740	1009
75°	410	382	358	341	376	440
85°	58	64	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5001.7	5001.7	5001.7	5001.7	5001.7
2.5°	4967.0	4967.0	4967.0	4961.2	4961.2
5°	4914.9	4909.2	4909.2	4903.4	4903.4
7.5°	4874.5	4868.7	4862.9	4857.1	4845.5
10°	4816.6	4816.6	4810.9	4781.9	4776.2
12.5°	4724.1	4718.3	4695.2	4654.7	4643.2
15°	4596.9	4596.9	4550.7	4504.4	4487.0
17.5°	4458.1	4452.4	4394.5	4348.3	4325.1
20°	4307.8	4296.2	4238.4	4163.2	4122.8
22.5°	4140.1	4140.1	4070.7	3972.4	3931.9
25°	3984.0	3960.9	3897.3	3758.5	3654.4
27.5°	3804.7	3770.0	3700.7	3504.1	3382.6
30°	3608.1	3590.8	3492.5	3238.1	3145.6
32.5°	3423.1	3394.2	3290.1	3024.1	2949.0
35°	3232.3	3209.2	3053.0	2821.7	2752.4
37.5°	3041.5	3012.6	2816.0	2630.9	2544.2
40°	2850.7	2816.0	2602.0	2434.3	2341.8
42.5°	2671.4	2625.2	2417.0	2237.7	2133.7
45°	2480.6	2428.6	2220.4	2035.4	1954.4
47.5°	2289.8	2243.5	2052.7	1861.9	1769.4
50°	2087.4	2046.9	1873.5	1682.6	1584.3
52.5°	1919.7	1856.1	1688.4	1497.6	1416.7
55°	1723.1	1671.1	1515.0	1335.7	1266.3
57.5°	1543.9	1491.8	1347.3	1179.6	1121.8
60°	1376.2	1301.0	1179.6	1035.0	988.8
62.5°	1191.1	1133.3	1029.2	907.8	965.6
65°	1023.5	965.6	873.1	890.5	740.1
67.5°	838.4	809.5	728.6	647.6	624.5
70°	682.3	647.6	618.7	532.0	508.8
72.5°	543.5	508.8	468.4	422.1	404.8
75°	410.5	381.6	358.5	341.2	375.8
77.5°	283.3	271.8	254.4	237.1	231.3
80°	185.0	179.3	173.5	167.7	161.9
82.5°	109.9	109.9	109.9	109.9	109.9
85°	57.8	63.6	69.4	75.2	81.0
87.5°	34.7	34.7	40.5	46.3	52.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)