

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: P563838

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563838
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-35-UNV-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

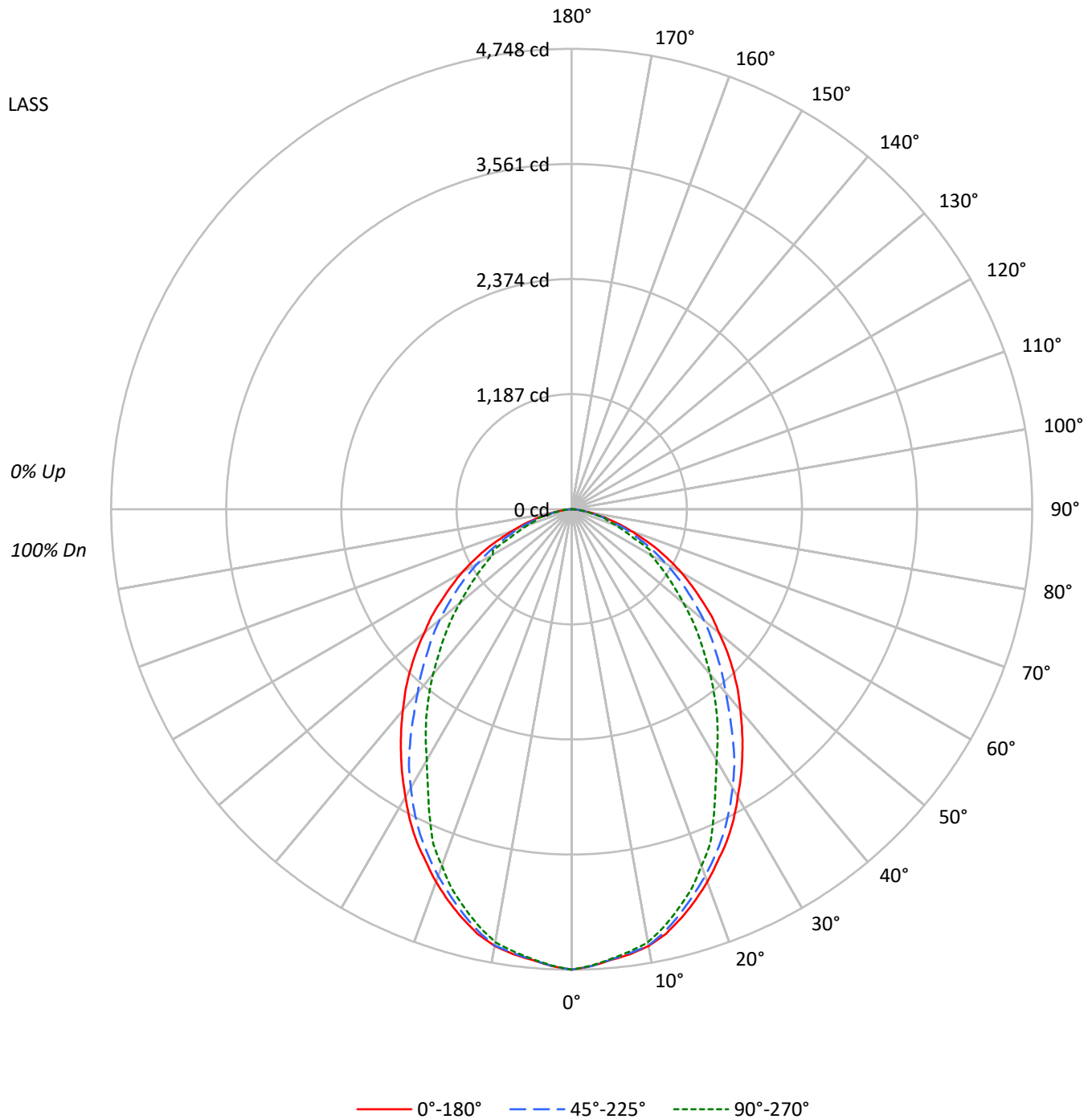
Lumens per Lamp: N/A
Luminaire Lumens: 9321.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6388	6388	6388
5°	6302	6294	6287
10°	6247	6240	6194
15°	6079	6017	5933
20°	5855	5761	5604
25°	5615	5492	5150
30°	5321	5151	4639
35°	5040	4760	4292
40°	4753	4339	3905
45°	4481	4011	3530
50°	4148	3723	3148
55°	3837	3373	2820
60°	3515	3013	2526
65°	3093	2639	2237
70°	2548	2310	1900
75°	2026	1769	1855
80°	1361	1276	1191
85°	848	1017	1186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4481 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.0	4.7
10°-20°	1213.0	13.0
20°-30°	1679.3	18.0
30°-40°	1790.6	19.2
40°-50°	1633.5	17.5
50°-60°	1279.7	13.7
60°-70°	834.1	8.9
70°-80°	369.5	4.0
80°-90°	79.3	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°	3334.2	35.8
0°-40°	5124.8	55.0
0°-60°	8038.1	86.2
0°-90°	9321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9321.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4748	4748	4748	4748	4748	
5°	4666	4660	4660	4655	4655	443
15°	4364	4364	4320	4276	4260	1227
25°	3782	3760	3700	3568	3469	1736
35°	3068	3046	2898	2679	2613	1918
45°	2355	2305	2108	1932	1855	1814
55°	1636	1586	1438	1268	1202	1467
65°	972	917	829	845	703	957
75°	390	362	340	324	357	418
85°	55	60	66	71	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4748.0	4748.0	4748.0	4748.0	4748.0
2.5°	4715.1	4715.1	4715.1	4709.6	4709.6
5°	4665.7	4660.2	4660.2	4654.7	4654.7
7.5°	4627.2	4621.7	4616.3	4610.8	4599.8
10°	4572.3	4572.3	4566.9	4539.4	4533.9
12.5°	4484.5	4479.0	4457.1	4418.7	4407.7
15°	4363.8	4363.8	4319.9	4275.9	4259.5
17.5°	4232.0	4226.5	4171.6	4127.7	4105.8
20°	4089.3	4078.3	4023.4	3952.1	3913.7
22.5°	3930.1	3930.1	3864.3	3770.9	3732.5
25°	3781.9	3760.0	3699.6	3567.9	3469.1
27.5°	3611.8	3578.8	3513.0	3326.3	3211.1
30°	3425.1	3408.7	3315.4	3073.8	2986.0
32.5°	3249.5	3222.0	3123.2	2870.8	2799.4
35°	3068.4	3046.4	2898.2	2678.6	2612.8
37.5°	2887.2	2859.8	2673.1	2497.5	2415.2
40°	2706.1	2673.1	2470.1	2310.9	2223.0
42.5°	2535.9	2492.0	2294.4	2124.2	2025.4
45°	2354.8	2305.4	2107.8	1932.1	1855.3
47.5°	2173.6	2129.7	1948.6	1767.5	1679.6
50°	1981.5	1943.1	1778.4	1597.3	1504.0
52.5°	1822.4	1762.0	1602.8	1421.7	1344.8
55°	1635.7	1586.3	1438.1	1268.0	1202.1
57.5°	1465.6	1416.2	1278.9	1119.8	1064.9
60°	1306.4	1235.0	1119.8	982.5	938.6
62.5°	1130.7	1075.8	977.0	861.8	916.7
65°	971.6	916.7	828.8	845.3	702.6
67.5°	795.9	768.5	691.6	614.8	592.8
70°	647.7	614.8	587.3	505.0	483.0
72.5°	516.0	483.0	444.6	400.7	384.2
75°	389.7	362.3	340.3	323.9	356.8
77.5°	269.0	258.0	241.5	225.0	219.6
80°	175.6	170.2	164.7	159.2	153.7
82.5°	104.3	104.3	104.3	104.3	104.3
85°	54.9	60.4	65.9	71.4	76.8
87.5°	32.9	32.9	38.4	43.9	49.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)