

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: P563646

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563646
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-LD4-4HI-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: 15311.0 lumens
Efficiency: N/A
Efficacy: 88.6 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

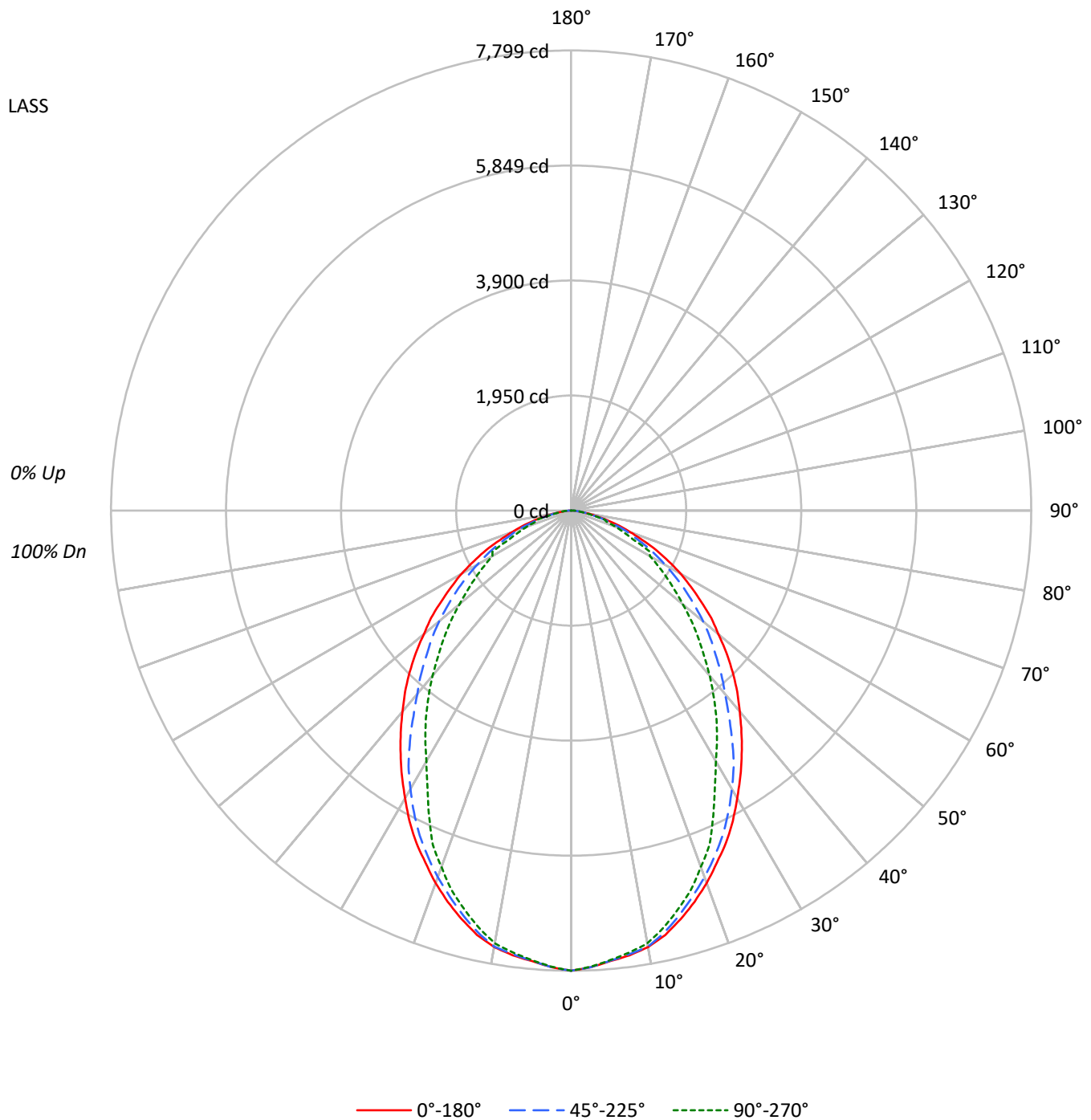
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10494	10494	10494
5°	10351	10339	10327
10°	10261	10249	10175
15°	9985	9884	9746
20°	9618	9463	9205
25°	9223	9022	8460
30°	8741	8461	7620
35°	8279	7820	7049
40°	7807	7126	6414
45°	7360	6588	5799
50°	6813	6115	5171
55°	6303	5541	4632
60°	5775	4950	4149
65°	5081	4335	3674
70°	4185	3795	3121
75°	3328	2906	3047
80°	2235	2096	1956
85°	1392	1670	1948

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7360 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	726.0	4.7
10°-20°	1992.5	13.0
20°-30°	2758.4	18.0
30°-40°	2941.3	19.2
40°-50°	2683.3	17.5
50°-60°	2102.2	13.7
60°-70°	1370.1	8.9
70°-80°	607.0	4.0
80°-90°	130.3	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°	5476.9	35.8
0°-40°	8418.1	55.0
0°-60°	13203.6	86.2
0°-90°	15311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7799	7799	7799	7799	7799	
5°	7664	7655	7655	7646	7646	727
15°	7168	7168	7096	7024	6997	2015
25°	6212	6176	6077	5861	5698	2852
35°	5040	5004	4761	4400	4292	3151
45°	3868	3787	3462	3174	3048	2980
55°	2687	2606	2362	2083	1975	2410
65°	1596	1506	1362	1388	1154	1573
75°	640	595	559	532	586	686
85°	90	99	108	117	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7799.2	7799.2	7799.2	7799.2	7799.2
2.5°	7745.1	7745.1	7745.1	7736.1	7736.1
5°	7664.0	7655.0	7655.0	7645.9	7645.9
7.5°	7600.9	7591.8	7582.8	7573.8	7555.8
10°	7510.7	7510.7	7501.7	7456.6	7447.6
12.5°	7366.4	7357.4	7321.3	7258.2	7240.2
15°	7168.1	7168.1	7095.9	7023.8	6996.8
17.5°	6951.7	6942.7	6852.5	6780.4	6744.3
20°	6717.2	6699.2	6609.0	6491.8	6428.7
22.5°	6455.8	6455.8	6347.6	6194.3	6131.2
25°	6212.3	6176.3	6077.1	5860.7	5698.4
27.5°	5932.8	5878.7	5770.5	5464.0	5274.6
30°	5626.3	5599.2	5445.9	5049.2	4904.9
32.5°	5337.7	5292.6	5130.4	4715.6	4598.4
35°	5040.2	5004.1	4760.7	4400.0	4291.8
37.5°	4742.6	4697.6	4391.0	4102.5	3967.2
40°	4445.1	4391.0	4057.4	3795.9	3651.7
42.5°	4165.6	4093.5	3768.9	3489.4	3327.1
45°	3868.1	3786.9	3462.3	3173.8	3047.6
47.5°	3570.5	3498.4	3200.8	2903.3	2759.0
50°	3254.9	3191.8	2921.3	2623.8	2470.5
52.5°	2993.5	2894.3	2632.8	2335.3	2209.0
55°	2686.9	2605.8	2362.3	2082.8	1974.6
57.5°	2407.4	2326.2	2100.8	1839.4	1749.2
60°	2145.9	2028.7	1839.4	1613.9	1541.8
62.5°	1857.4	1767.2	1604.9	1415.6	1505.7
65°	1595.9	1505.7	1361.5	1388.5	1154.1
67.5°	1307.4	1262.3	1136.1	1009.8	973.8
70°	1063.9	1009.8	964.8	829.5	793.4
72.5°	847.5	793.4	730.3	658.2	631.2
75°	640.2	595.1	559.0	532.0	586.1
77.5°	441.8	423.8	396.7	369.7	360.7
80°	288.5	279.5	270.5	261.5	252.5
82.5°	171.3	171.3	171.3	171.3	171.3
85°	90.2	99.2	108.2	117.2	126.2
87.5°	54.1	54.1	63.1	72.1	81.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)