

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: P564123

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564123
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-LD4-4STD-40-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14696.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

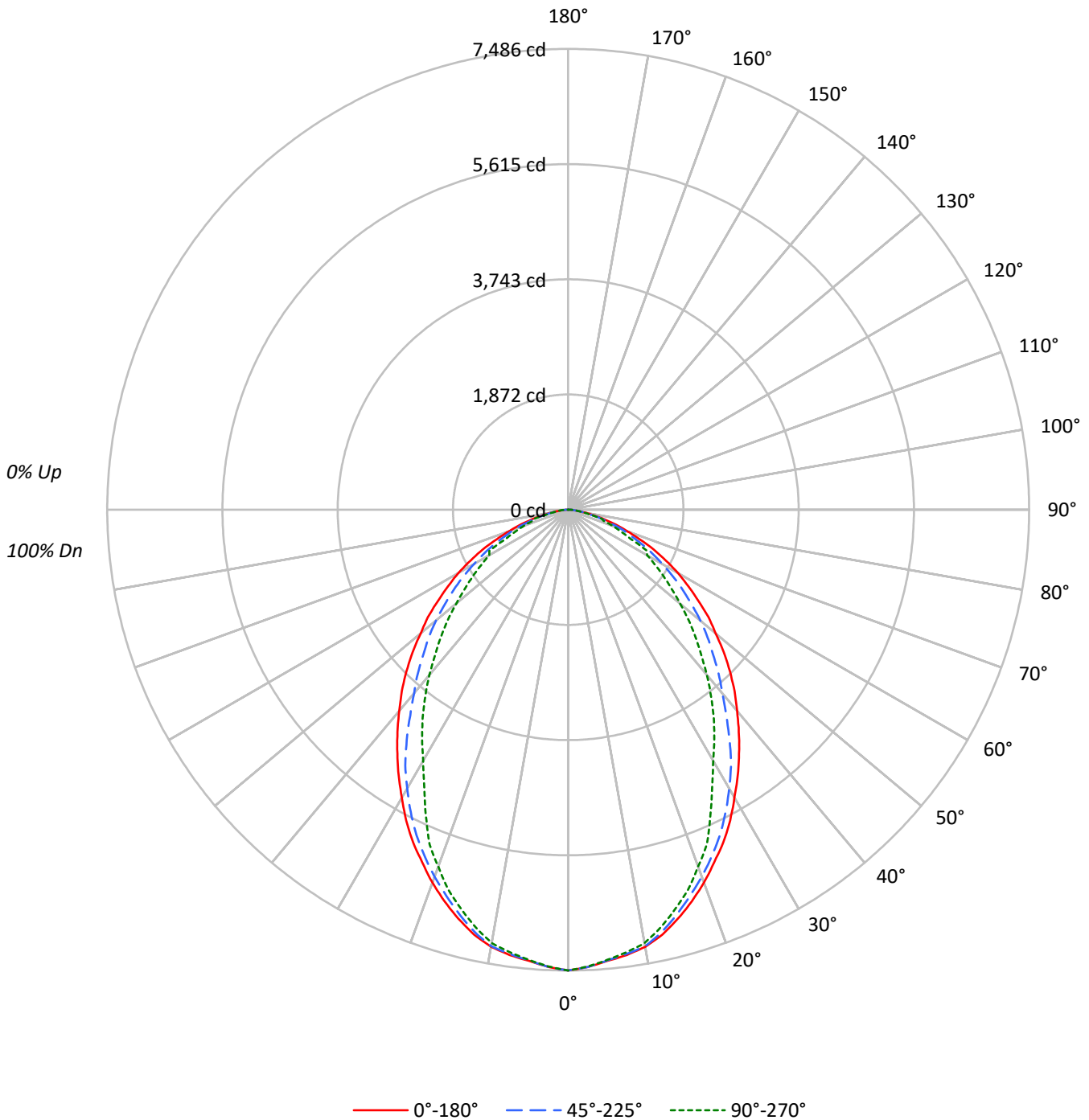
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10072	10072	10072
5°	9935	9924	9912
10°	9849	9838	9766
15°	9584	9487	9355
20°	9232	9083	8835
25°	8852	8660	8120
30°	8390	8121	7314
35°	7946	7506	6766
40°	7494	6840	6156
45°	7065	6323	5566
50°	6540	5869	4964
55°	6050	5319	4446
60°	5543	4751	3982
65°	4877	4160	3527
70°	4017	3643	2996
75°	3195	2790	2924
80°	2146	2011	1877
85°	1335	1604	1871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7065 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	696.8	4.7
10°-20°	1912.4	13.0
20°-30°	2647.6	18.0
30°-40°	2823.1	19.2
40°-50°	2575.5	17.5
50°-60°	2017.7	13.7
60°-70°	1315.1	8.9
70°-80°	582.6	4.0
80°-90°	125.1	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°	5256.9	35.8
0°-40°	8080.0	55.0
0°-60°	12673.2	86.2
0°-90°	14696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7486	7486	7486	7486	7486	
5°	7356	7348	7348	7339	7339	698
15°	6880	6880	6811	6742	6716	1934
25°	5963	5928	5833	5625	5470	2738
35°	4838	4803	4570	4223	4119	3024
45°	3713	3635	3323	3046	2925	2860
55°	2579	2501	2267	1999	1895	2313
65°	1532	1445	1307	1333	1108	1510
75°	614	571	537	511	562	659
85°	86	95	104	112	121	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7485.9	7485.9	7485.9	7485.9	7485.9
2.5°	7434.0	7434.0	7434.0	7425.4	7425.4
5°	7356.1	7347.5	7347.5	7338.8	7338.8
7.5°	7295.6	7286.9	7278.2	7269.6	7252.3
10°	7209.0	7209.0	7200.4	7157.1	7148.4
12.5°	7070.5	7061.9	7027.3	6966.7	6949.4
15°	6880.1	6880.1	6810.9	6741.7	6715.7
17.5°	6672.4	6663.8	6577.2	6508.0	6473.4
20°	6447.4	6430.1	6343.6	6231.1	6170.5
22.5°	6196.5	6196.5	6092.6	5945.5	5884.9
25°	5962.8	5928.2	5833.0	5625.3	5469.5
27.5°	5694.5	5642.6	5538.7	5244.5	5062.7
30°	5400.3	5374.3	5227.2	4846.4	4707.9
32.5°	5123.3	5080.1	4924.3	4526.2	4413.7
35°	4837.7	4803.1	4569.5	4223.3	4119.4
37.5°	4552.1	4508.9	4214.6	3937.7	3807.9
40°	4266.6	4214.6	3894.4	3643.4	3505.0
42.5°	3998.3	3929.0	3617.5	3349.2	3193.4
45°	3712.7	3634.8	3323.2	3046.3	2925.1
47.5°	3427.1	3357.9	3072.3	2786.7	2648.2
50°	3124.2	3063.6	2804.0	2518.4	2371.3
52.5°	2873.2	2778.0	2527.0	2241.5	2120.3
55°	2579.0	2501.1	2267.4	1999.1	1895.3
57.5°	2310.7	2232.8	2016.4	1765.5	1678.9
60°	2059.7	1947.2	1765.5	1549.1	1479.9
62.5°	1782.8	1696.2	1540.5	1358.7	1445.3
65°	1531.8	1445.3	1306.8	1332.8	1107.7
67.5°	1254.9	1211.6	1090.4	969.3	934.7
70°	1021.2	969.3	926.0	796.2	761.6
72.5°	813.5	761.6	701.0	631.8	605.8
75°	614.5	571.2	536.6	510.6	562.5
77.5°	424.1	406.8	380.8	354.8	346.2
80°	276.9	268.3	259.6	251.0	242.3
82.5°	164.4	164.4	164.4	164.4	164.4
85°	86.5	95.2	103.9	112.5	121.2
87.5°	51.9	51.9	60.6	69.2	77.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)