

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: P564093

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564093
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-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15627.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

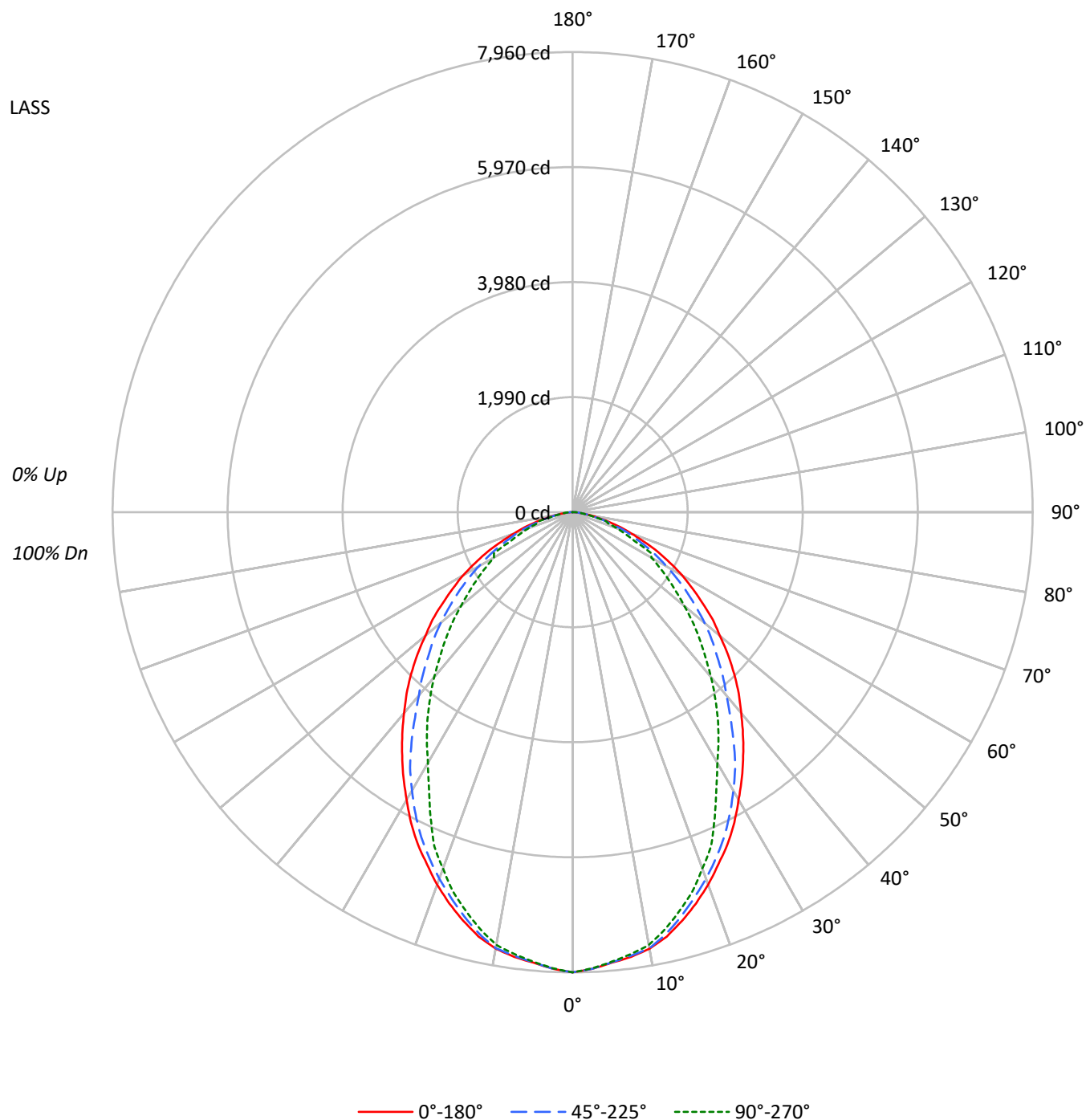
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	10710	10710	10710
5°	10565	10552	10540
10°	10473	10461	10385
15°	10191	10088	9947
20°	9817	9658	9395
25°	9413	9208	8634
30°	8922	8636	7778
35°	8450	7981	7195
40°	7968	7273	6546
45°	7512	6724	5919
50°	6954	6241	5278
55°	6433	5656	4728
60°	5894	5052	4235
65°	5186	4424	3750
70°	4272	3874	3186
75°	3397	2966	3110
80°	2282	2139	1997
85°	1420	1704	1988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7512 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	741.0	4.7
10°-20°	2033.6	13.0
20°-30°	2815.3	18.0
30°-40°	3002.0	19.2
40°-50°	2738.7	17.5
50°-60°	2145.5	13.7
60°-70°	1398.4	8.9
70°-80°	619.5	4.0
80°-90°	133.0	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°	5589.9	35.8
0°-40°	8591.9	55.0
0°-60°	13476.1	86.2
0°-90°	15627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7960	7960	7960	7960	7960	
5°	7822	7813	7813	7804	7804	743
15°	7316	7316	7242	7169	7141	2057
25°	6340	6304	6202	5982	5816	2911
35°	5144	5107	4859	4491	4380	3216
45°	3948	3865	3534	3239	3110	3041
55°	2742	2660	2411	2126	2015	2460
65°	1629	1537	1390	1417	1178	1605
75°	653	607	571	543	598	700
85°	92	101	110	120	129	128
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7960.2	7960.2	7960.2	7960.2	7960.2
2.5°	7905.0	7905.0	7905.0	7895.8	7895.8
5°	7822.1	7812.9	7812.9	7803.7	7803.7
7.5°	7757.7	7748.5	7739.3	7730.1	7711.7
10°	7665.7	7665.7	7656.5	7610.5	7601.3
12.5°	7518.5	7509.3	7472.5	7408.0	7389.6
15°	7316.0	7316.0	7242.4	7168.8	7141.2
17.5°	7095.1	7085.9	6993.9	6920.3	6883.5
20°	6855.9	6837.5	6745.5	6625.8	6561.4
22.5°	6589.0	6589.0	6478.6	6322.1	6257.7
25°	6340.5	6303.7	6202.5	5981.6	5816.0
27.5°	6055.3	6000.0	5889.6	5576.7	5383.5
30°	5742.4	5714.8	5558.3	5153.4	5006.2
32.5°	5447.9	5401.9	5236.2	4812.9	4693.3
35°	5144.2	5107.4	4858.9	4490.8	4380.4
37.5°	4840.5	4794.5	4481.6	4187.1	4049.1
40°	4536.8	4481.6	4141.1	3874.3	3727.0
42.5°	4251.6	4177.9	3846.7	3561.4	3395.7
45°	3947.9	3865.1	3533.8	3239.3	3110.5
47.5°	3644.2	3570.6	3266.9	2963.2	2816.0
50°	3322.1	3257.7	2981.6	2677.9	2521.5
52.5°	3055.2	2954.0	2687.1	2383.5	2254.6
55°	2742.4	2659.5	2411.1	2125.8	2015.4
57.5°	2457.1	2374.3	2144.2	1877.3	1785.3
60°	2190.2	2070.6	1877.3	1647.3	1573.6
62.5°	1895.7	1803.7	1638.0	1444.8	1536.8
65°	1628.8	1536.8	1389.6	1417.2	1177.9
67.5°	1334.4	1288.4	1159.5	1030.7	993.9
70°	1085.9	1030.7	984.7	846.6	809.8
72.5°	865.0	809.8	745.4	671.8	644.2
75°	653.4	607.4	570.6	542.9	598.2
77.5°	450.9	432.5	404.9	377.3	368.1
80°	294.5	285.3	276.1	266.9	257.7
82.5°	174.8	174.8	174.8	174.8	174.8
85°	92.0	101.2	110.4	119.6	128.8
87.5°	55.2	55.2	64.4	73.6	82.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)