

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: P563637

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563637
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-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18554.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

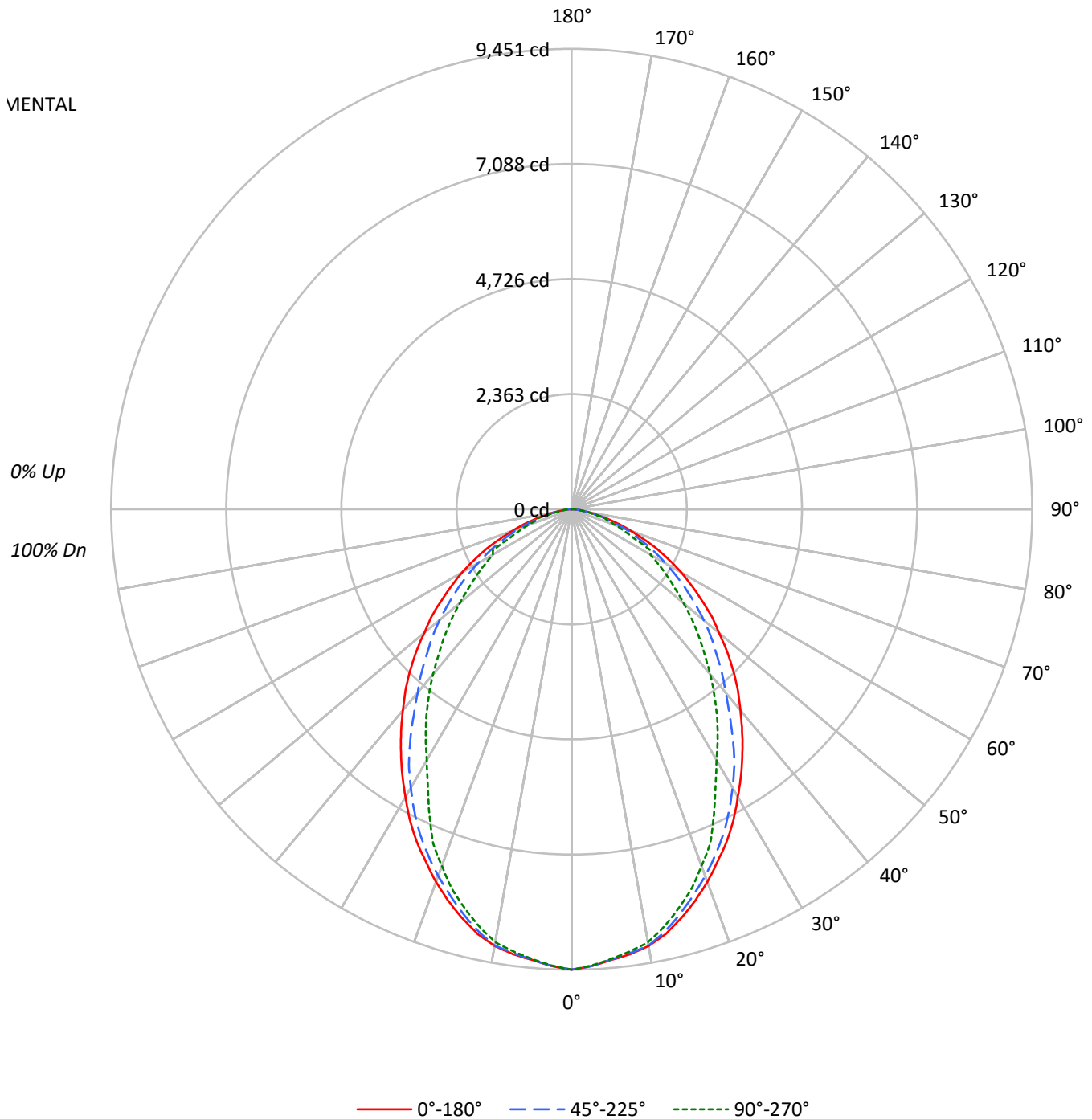
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12716	12716	12716
5°	12544	12529	12514
10°	12435	12420	12330
15°	12100	11978	11810
20°	11655	11467	11155
25°	11176	10933	10252
30°	10593	10253	9235
35°	10032	9476	8543
40°	9461	8636	7772
45°	8919	7984	7027
50°	8256	7410	6267
55°	7638	6715	5613
60°	6998	5998	5028
65°	6157	5253	4453
70°	5072	4599	3782
75°	4033	3522	3692
80°	2709	2540	2370
85°	1687	2024	2362

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8919 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	879.8	4.7
10°-20°	2414.5	13.0
20°-30°	3342.7	18.0
30°-40°	3564.3	19.2
40°-50°	3251.6	17.5
50°-60°	2547.4	13.7
60°-70°	1660.3	8.9
70°-80°	735.6	4.0
80°-90°	157.9	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°	6636.9	35.8
0°-40°	10201.2	55.0
0°-60°	16000.2	86.2
0°-90°	18554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9451	9451	9451	9451	9451	
5°	9287	9276	9276	9265	9265	882
15°	8686	8686	8599	8512	8479	2442
25°	7528	7484	7364	7102	6905	3456
35°	6108	6064	5769	5332	5201	3818
45°	4687	4589	4196	3846	3693	3611
55°	3256	3158	2863	2524	2393	2920
65°	1934	1825	1650	1683	1399	1906
75°	776	721	677	645	710	831
85°	109	120	131	142	153	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9451.2	9451.2	9451.2	9451.2	9451.2
2.5°	9385.6	9385.6	9385.6	9374.7	9374.7
5°	9287.3	9276.3	9276.3	9265.4	9265.4
7.5°	9210.8	9199.9	9188.9	9178.0	9156.2
10°	9101.5	9101.5	9090.6	9036.0	9025.0
12.5°	8926.7	8915.8	8872.1	8795.6	8773.7
15°	8686.3	8686.3	8598.9	8511.5	8478.7
17.5°	8424.1	8413.2	8303.9	8216.5	8172.8
20°	8140.0	8118.2	8008.9	7866.9	7790.4
22.5°	7823.2	7823.2	7692.0	7506.3	7429.8
25°	7528.1	7484.4	7364.3	7102.0	6905.4
27.5°	7189.4	7123.9	6992.8	6621.3	6391.8
30°	6817.9	6785.2	6599.4	6118.7	5943.9
32.5°	6468.3	6413.7	6217.0	5714.4	5572.4
35°	6107.7	6064.0	5769.0	5332.0	5200.9
37.5°	5747.2	5692.5	5321.1	4971.4	4807.5
40°	5386.6	5321.1	4916.8	4599.9	4425.1
42.5°	5047.9	4960.5	4567.2	4228.4	4031.8
45°	4687.3	4589.0	4195.7	3846.0	3693.1
47.5°	4326.8	4239.4	3878.8	3518.2	3343.4
50°	3944.4	3867.9	3540.1	3179.5	2993.8
52.5°	3627.5	3507.3	3190.4	2829.9	2676.9
55°	3256.0	3157.7	2862.7	2524.0	2392.8
57.5°	2917.3	2819.0	2545.8	2228.9	2119.7
60°	2600.4	2458.4	2228.9	1955.8	1868.4
62.5°	2250.8	2141.5	1944.9	1715.4	1824.7
65°	1933.9	1824.7	1649.9	1682.6	1398.6
67.5°	1584.3	1529.7	1376.7	1223.7	1180.0
70°	1289.3	1223.7	1169.1	1005.2	961.5
72.5°	1027.1	961.5	885.0	797.6	764.8
75°	775.8	721.1	677.4	644.6	710.2
77.5°	535.4	513.5	480.8	448.0	437.0
80°	349.6	338.7	327.8	316.9	305.9
82.5°	207.6	207.6	207.6	207.6	207.6
85°	109.3	120.2	131.1	142.0	153.0
87.5°	65.6	65.6	76.5	87.4	98.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)