

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: P563738

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563738
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-40-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15146.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

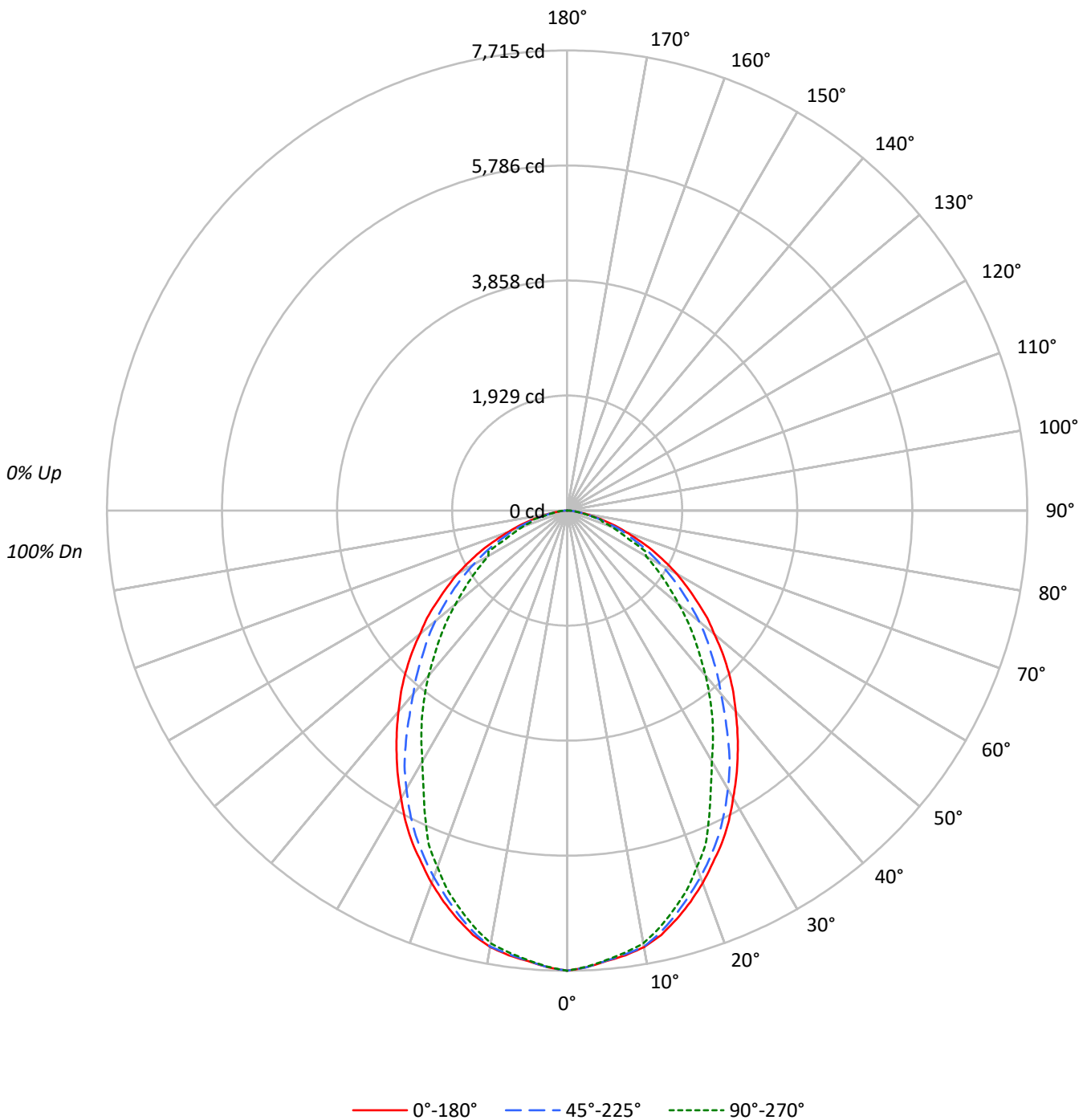
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10381	10381	10381
5°	10240	10228	10215
10°	10151	10139	10066
15°	9877	9778	9641
20°	9514	9361	9106
25°	9123	8925	8369
30°	8647	8370	7538
35°	8190	7735	6974
40°	7723	7050	6345
45°	7281	6517	5736
50°	6740	6049	5116
55°	6235	5482	4582
60°	5712	4896	4104
65°	5026	4288	3635
70°	4140	3755	3088
75°	3292	2875	3014
80°	2211	2073	1935
85°	1377	1652	1928

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7281 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	718.2	4.7
10°-20°	1971.0	13.0
20°-30°	2728.7	18.0
30°-40°	2909.6	19.2
40°-50°	2654.4	17.5
50°-60°	2079.5	13.7
60°-70°	1355.3	8.9
70°-80°	600.5	4.0
80°-90°	128.9	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°	5417.8	35.8
0°-40°	8327.4	55.0
0°-60°	13061.3	86.2
0°-90°	15146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15146.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7715	7715	7715	7715	7715	
5°	7581	7572	7572	7564	7564	720
15°	7091	7091	7020	6948	6921	1993
25°	6145	6110	6012	5798	5637	2821
35°	4986	4950	4709	4353	4246	3117
45°	3826	3746	3425	3140	3015	2947
55°	2658	2578	2337	2060	1953	2384
65°	1579	1490	1347	1374	1142	1556
75°	633	589	553	526	580	679
85°	89	98	107	116	125	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7715.2	7715.2	7715.2	7715.2	7715.2
2.5°	7661.7	7661.7	7661.7	7652.7	7652.7
5°	7581.4	7572.5	7572.5	7563.5	7563.5
7.5°	7518.9	7510.0	7501.1	7492.2	7474.3
10°	7429.8	7429.8	7420.8	7376.2	7367.3
12.5°	7287.0	7278.1	7242.4	7180.0	7162.2
15°	7090.8	7090.8	7019.5	6948.1	6921.4
17.5°	6876.8	6867.8	6778.6	6707.3	6671.6
20°	6644.9	6627.0	6537.8	6421.9	6359.4
22.5°	6386.2	6386.2	6279.2	6127.5	6065.1
25°	6145.4	6109.7	6011.6	5797.5	5637.0
27.5°	5868.9	5815.4	5708.3	5405.1	5217.8
30°	5565.6	5538.9	5387.2	4994.8	4852.1
32.5°	5280.2	5235.6	5075.1	4664.8	4548.8
35°	4985.9	4950.2	4709.4	4352.6	4245.6
37.5°	4691.5	4646.9	4343.7	4058.3	3924.5
40°	4397.2	4343.7	4013.7	3755.0	3612.3
42.5°	4120.7	4049.3	3728.3	3451.8	3291.2
45°	3826.4	3746.1	3425.0	3139.6	3014.7
47.5°	3532.0	3460.7	3166.3	2872.0	2729.3
50°	3219.9	3157.4	2889.8	2595.5	2443.9
52.5°	2961.2	2863.1	2604.4	2310.1	2185.2
55°	2657.9	2577.7	2336.8	2060.4	1953.3
57.5°	2381.4	2301.2	2078.2	1819.5	1730.3
60°	2122.8	2006.8	1819.5	1596.5	1525.2
62.5°	1837.4	1748.2	1587.6	1400.3	1489.5
65°	1578.7	1489.5	1346.8	1373.6	1141.7
67.5°	1293.3	1248.7	1123.8	999.0	963.3
70°	1052.5	999.0	954.4	820.6	784.9
72.5°	838.4	784.9	722.5	651.1	624.3
75°	633.3	588.7	553.0	526.2	579.8
77.5°	437.0	419.2	392.4	365.7	356.8
80°	285.4	276.5	267.6	258.7	249.7
82.5°	169.5	169.5	169.5	169.5	169.5
85°	89.2	98.1	107.0	116.0	124.9
87.5°	53.5	53.5	62.4	71.4	80.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)