

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: P563741

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563741
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 17826.0 lumens
Efficiency: N/A
Efficacy: 103.2 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

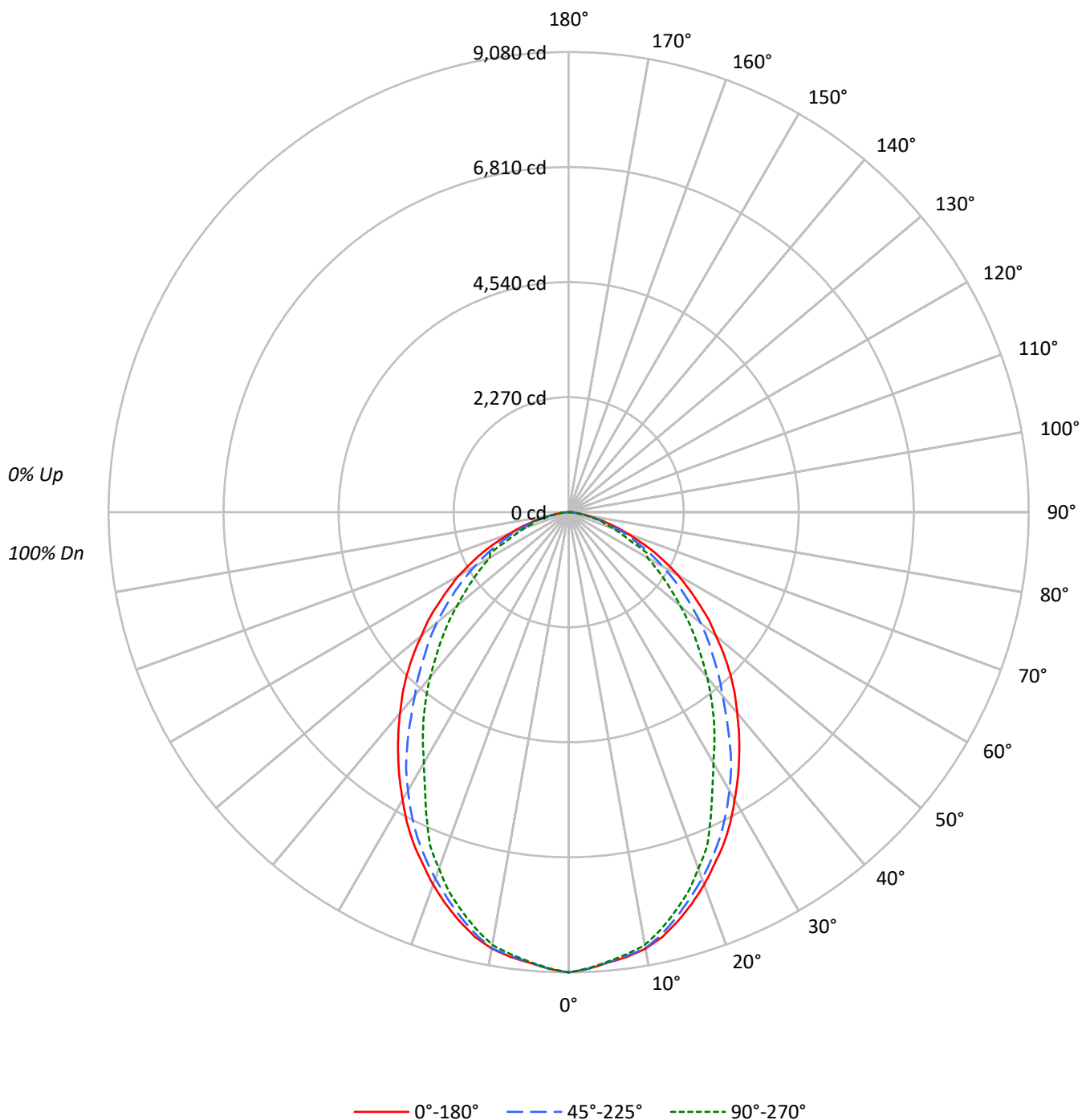
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	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
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12217	12217	12217
5°	12052	12037	12023
10°	11947	11933	11847
15°	11625	11508	11347
20°	11198	11018	10717
25°	10738	10504	9849
30°	10177	9851	8872
35°	9639	9104	8207
40°	9090	8297	7467
45°	8569	7670	6752
50°	7932	7119	6021
55°	7338	6452	5393
60°	6723	5763	4831
65°	5916	5046	4278
70°	4873	4419	3634
75°	3874	3383	3547
80°	2603	2440	2277
85°	1621	1945	2269

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8569 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	845.3	4.7
10°-20°	2319.7	13.0
20°-30°	3211.5	18.0
30°-40°	3424.4	19.2
40°-50°	3124.1	17.5
50°-60°	2447.5	13.7
60°-70°	1595.1	8.9
70°-80°	706.7	4.0
80°-90°	151.8	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°	6376.5	35.8
0°-40°	9800.9	55.0
0°-60°	15372.4	86.2
0°-90°	17826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9080	9080	9080	9080	9080	
5°	8923	8912	8912	8902	8902	847
15°	8346	8346	8262	8178	8146	2346
25°	7233	7191	7075	6823	6634	3321
35°	5868	5826	5543	5123	4997	3669
45°	4503	4409	4031	3695	3548	3469
55°	3128	3034	2750	2425	2299	2806
65°	1858	1753	1585	1617	1344	1831
75°	745	693	651	619	682	799
85°	105	116	126	136	147	146
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9080.3	9080.3	9080.3	9080.3	9080.3
2.5°	9017.3	9017.3	9017.3	9006.8	9006.8
5°	8922.9	8912.4	8912.4	8901.9	8901.9
7.5°	8849.4	8838.9	8828.4	8817.9	8796.9
10°	8744.4	8744.4	8733.9	8681.4	8670.9
12.5°	8576.4	8565.9	8524.0	8450.5	8429.5
15°	8345.5	8345.5	8261.5	8177.5	8146.0
17.5°	8093.6	8083.1	7978.1	7894.1	7852.1
20°	7820.6	7799.6	7694.7	7558.2	7484.7
22.5°	7516.2	7516.2	7390.2	7211.8	7138.3
25°	7232.8	7190.8	7075.3	6823.4	6634.4
27.5°	6907.3	6844.4	6718.4	6361.5	6141.0
30°	6550.4	6518.9	6340.5	5878.6	5710.6
32.5°	6214.5	6162.0	5973.1	5490.2	5353.7
35°	5868.1	5826.1	5542.7	5122.8	4996.8
37.5°	5521.7	5469.2	5112.3	4776.4	4618.9
40°	5175.3	5112.3	4723.9	4419.4	4251.5
42.5°	4849.8	4765.9	4387.9	4062.5	3873.6
45°	4503.4	4408.9	4031.0	3695.1	3548.2
47.5°	4157.0	4073.0	3726.6	3380.2	3212.2
50°	3789.6	3716.1	3401.2	3054.8	2876.3
52.5°	3485.2	3369.7	3065.3	2718.8	2571.9
55°	3128.3	3033.8	2750.3	2424.9	2298.9
57.5°	2802.8	2708.4	2445.9	2141.5	2036.5
60°	2498.4	2361.9	2141.5	1879.1	1795.1
62.5°	2162.5	2057.5	1868.6	1648.1	1753.1
65°	1858.1	1753.1	1585.1	1616.6	1343.7
67.5°	1522.1	1469.6	1322.7	1175.7	1133.7
70°	1238.7	1175.7	1123.2	965.8	923.8
72.5°	986.8	923.8	850.3	766.3	734.8
75°	745.3	692.8	650.8	619.4	682.3
77.5°	514.4	493.4	461.9	430.4	419.9
80°	335.9	325.4	314.9	304.4	293.9
82.5°	199.5	199.5	199.5	199.5	199.5
85°	105.0	115.5	126.0	136.5	147.0
87.5°	63.0	63.0	73.5	84.0	94.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)