

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: P563459

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563459
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-LD4-3STD-35-UNV-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10901.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

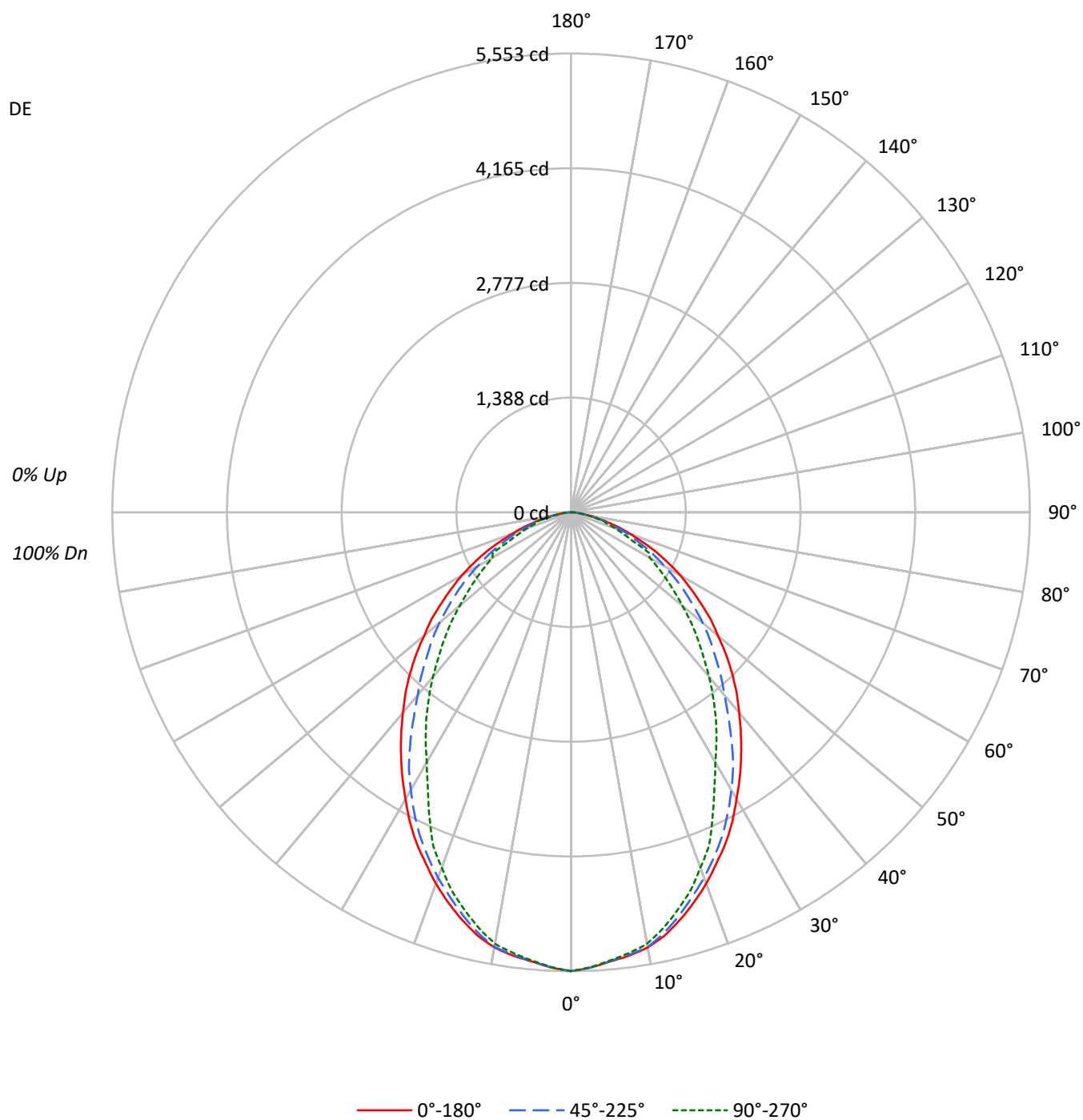
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7471	7471	7471
5°	7370	7361	7352
10°	7306	7297	7245
15°	7109	7037	6939
20°	6848	6738	6554
25°	6566	6423	6023
30°	6223	6024	5426
35°	5894	5567	5019
40°	5559	5074	4566
45°	5240	4691	4129
50°	4851	4354	3682
55°	4487	3945	3298
60°	4111	3524	2954
65°	3617	3086	2616
70°	2980	2702	2222
75°	2370	2069	2169
80°	1592	1492	1392
85°	991	1189	1388

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5240 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	516.9	4.7
10°-20°	1418.6	13.0
20°-30°	1963.9	18.0
30°-40°	2094.1	19.2
40°-50°	1910.4	17.5
50°-60°	1496.7	13.7
60°-70°	975.5	8.9
70°-80°	432.2	4.0
80°-90°	92.8	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°	3899.4	35.8
0°-40°	5993.5	55.0
0°-60°	9400.6	86.2
0°-90°	10901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5553	5553	5553	5553	5553	
5°	5456	5450	5450	5444	5444	518
15°	5104	5104	5052	5001	4982	1435
25°	4423	4397	4327	4173	4057	2031
35°	3588	3563	3390	3133	3056	2243
45°	2754	2696	2465	2260	2170	2121
55°	1913	1855	1682	1483	1406	1716
65°	1136	1072	969	989	822	1120
75°	456	424	398	379	417	488
85°	64	71	77	84	90	89
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5552.8	5552.8	5552.8	5552.8	5552.8
2.5°	5514.3	5514.3	5514.3	5507.9	5507.9
5°	5456.5	5450.1	5450.1	5443.7	5443.7
7.5°	5411.6	5405.2	5398.8	5392.3	5379.5
10°	5347.4	5347.4	5341.0	5308.9	5302.5
12.5°	5244.7	5238.3	5212.6	5167.7	5154.8
15°	5103.5	5103.5	5052.1	5000.8	4981.5
17.5°	4949.4	4943.0	4878.8	4827.4	4801.7
20°	4782.5	4769.7	4705.5	4622.0	4577.1
22.5°	4596.3	4596.3	4519.3	4410.2	4365.2
25°	4423.0	4397.3	4326.7	4172.6	4057.1
27.5°	4224.0	4185.5	4108.4	3890.2	3755.4
30°	4005.7	3986.5	3877.3	3594.9	3492.2
32.5°	3800.3	3768.2	3652.7	3357.4	3273.9
35°	3588.5	3562.8	3389.5	3132.7	3055.7
37.5°	3376.6	3344.5	3126.3	2920.8	2824.6
40°	3164.8	3126.3	2888.8	2702.6	2599.9
42.5°	2965.8	2914.4	2683.3	2484.3	2368.8
45°	2753.9	2696.2	2465.1	2259.6	2169.8
47.5°	2542.1	2490.7	2278.9	2067.1	1964.4
50°	2317.4	2272.5	2079.9	1868.1	1758.9
52.5°	2131.3	2060.6	1874.5	1662.6	1572.8
55°	1913.0	1855.2	1681.9	1482.9	1405.9
57.5°	1714.0	1656.2	1495.7	1309.6	1245.4
60°	1527.8	1444.4	1309.6	1149.1	1097.7
62.5°	1322.4	1258.2	1142.7	1007.9	1072.0
65°	1136.2	1072.0	969.3	988.6	821.7
67.5°	930.8	898.7	808.9	719.0	693.3
70°	757.5	719.0	686.9	590.6	564.9
72.5°	603.4	564.9	520.0	468.6	449.4
75°	455.8	423.7	398.0	378.7	417.3
77.5°	314.6	301.7	282.5	263.2	256.8
80°	205.4	199.0	192.6	186.2	179.7
82.5°	122.0	122.0	122.0	122.0	122.0
85°	64.2	70.6	77.0	83.5	89.9
87.5°	38.5	38.5	44.9	51.4	57.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)