

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: P564191

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564191
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-50-UNV-82-97-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14556.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

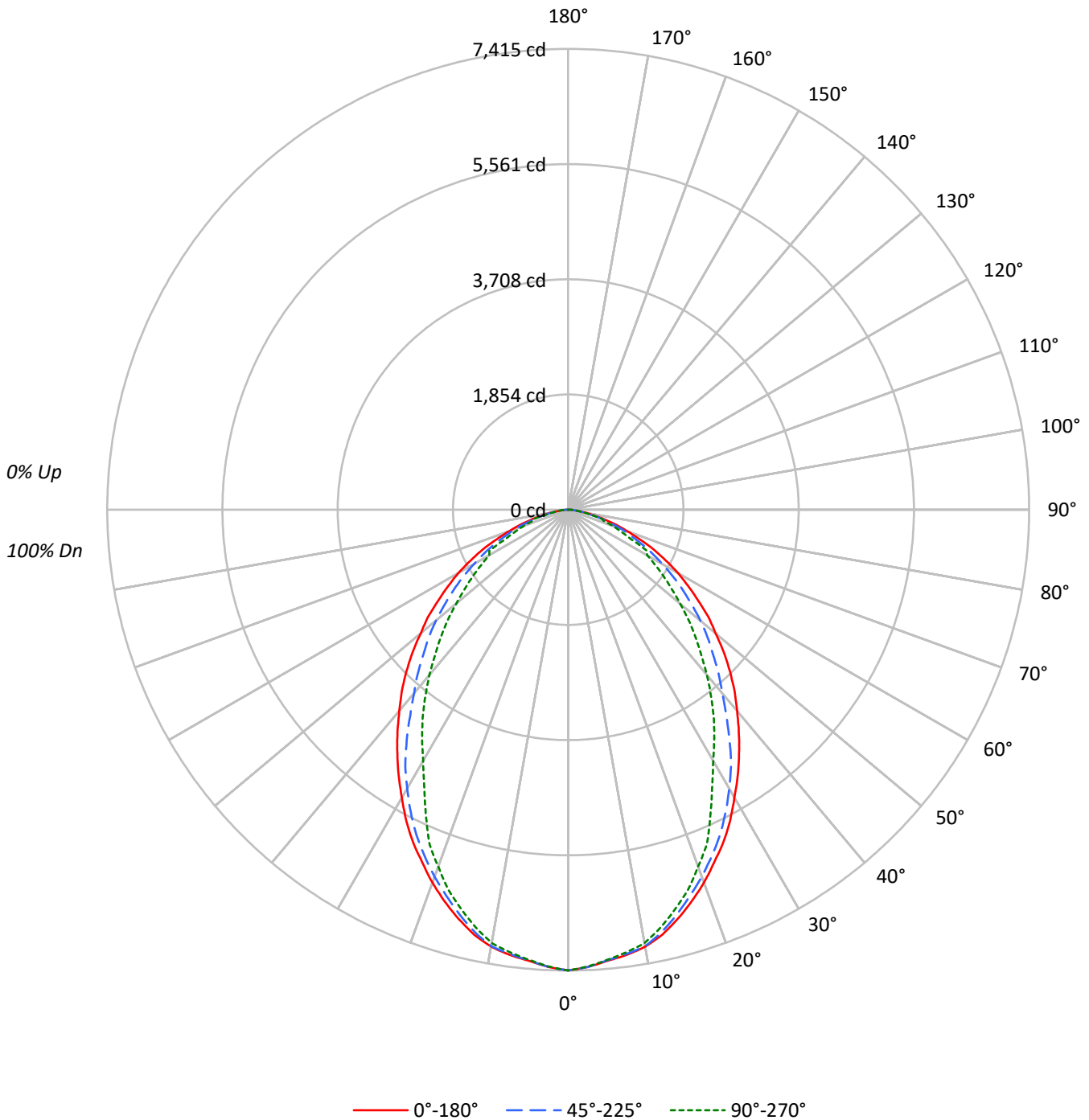
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				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°	9976	9976	9976
5°	9841	9829	9818
10°	9755	9744	9673
15°	9492	9397	9266
20°	9144	8997	8751
25°	8768	8577	8043
30°	8310	8044	7245
35°	7871	7434	6702
40°	7422	6775	6098
45°	6997	6263	5513
50°	6477	5813	4916
55°	5992	5268	4404
60°	5490	4706	3944
65°	4830	4121	3493
70°	3979	3608	2967
75°	3164	2763	2897
80°	2125	1993	1860
85°	1323	1589	1853

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6997 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	690.2	4.7
10°-20°	1894.2	13.0
20°-30°	2622.4	18.0
30°-40°	2796.2	19.2
40°-50°	2551.0	17.5
50°-60°	1998.5	13.7
60°-70°	1302.5	8.9
70°-80°	577.1	4.0
80°-90°	123.9	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°	5206.8	35.8
0°-40°	8003.0	55.0
0°-60°	12552.5	86.2
0°-90°	14556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7415	7415	7415	7415	7415	
5°	7286	7278	7278	7269	7269	692
15°	6815	6815	6746	6678	6652	1916
25°	5906	5872	5777	5572	5417	2711
35°	4792	4757	4526	4183	4080	2996
45°	3677	3600	3292	3017	2897	2833
55°	2554	2477	2246	1980	1877	2291
65°	1517	1432	1294	1320	1097	1495
75°	609	566	532	506	557	652
85°	86	94	103	111	120	119
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7414.6	7414.6	7414.6	7414.6	7414.6
2.5°	7363.2	7363.2	7363.2	7354.6	7354.6
5°	7286.1	7277.5	7277.5	7268.9	7268.9
7.5°	7226.1	7217.5	7208.9	7200.3	7183.2
10°	7140.3	7140.3	7131.8	7088.9	7080.3
12.5°	7003.2	6994.6	6960.3	6900.3	6883.2
15°	6814.6	6814.6	6746.0	6677.5	6651.7
17.5°	6608.9	6600.3	6514.6	6446.0	6411.7
20°	6386.0	6368.9	6283.2	6171.7	6111.7
22.5°	6137.4	6137.4	6034.6	5888.8	5828.8
25°	5906.0	5871.7	5777.4	5571.7	5417.4
27.5°	5640.3	5588.8	5486.0	5194.5	5014.5
30°	5348.8	5323.1	5177.4	4800.2	4663.1
32.5°	5074.5	5031.7	4877.4	4483.1	4371.6
35°	4791.7	4757.4	4525.9	4183.1	4080.2
37.5°	4508.8	4465.9	4174.5	3900.2	3771.6
40°	4225.9	4174.5	3857.3	3608.7	3471.6
42.5°	3960.2	3891.6	3583.0	3317.3	3163.0
45°	3677.3	3600.2	3291.6	3017.3	2897.3
47.5°	3394.4	3325.9	3043.0	2760.1	2623.0
50°	3094.4	3034.4	2777.3	2494.4	2348.7
52.5°	2845.8	2751.6	2503.0	2220.1	2100.1
55°	2554.4	2477.3	2245.8	1980.1	1877.2
57.5°	2288.7	2211.5	1997.2	1748.7	1662.9
60°	2040.1	1928.7	1748.7	1534.4	1465.8
62.5°	1765.8	1680.1	1525.8	1345.8	1431.5
65°	1517.2	1431.5	1294.3	1320.1	1097.2
67.5°	1242.9	1200.1	1080.1	960.0	925.8
70°	1011.5	960.0	917.2	788.6	754.3
72.5°	805.8	754.3	694.3	625.7	600.0
75°	608.6	565.7	531.5	505.7	557.2
77.5°	420.0	402.9	377.2	351.4	342.9
80°	274.3	265.7	257.2	248.6	240.0
82.5°	162.9	162.9	162.9	162.9	162.9
85°	85.7	94.3	102.9	111.4	120.0
87.5°	51.4	51.4	60.0	68.6	77.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)