

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: P564173

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564173
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-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 15098.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

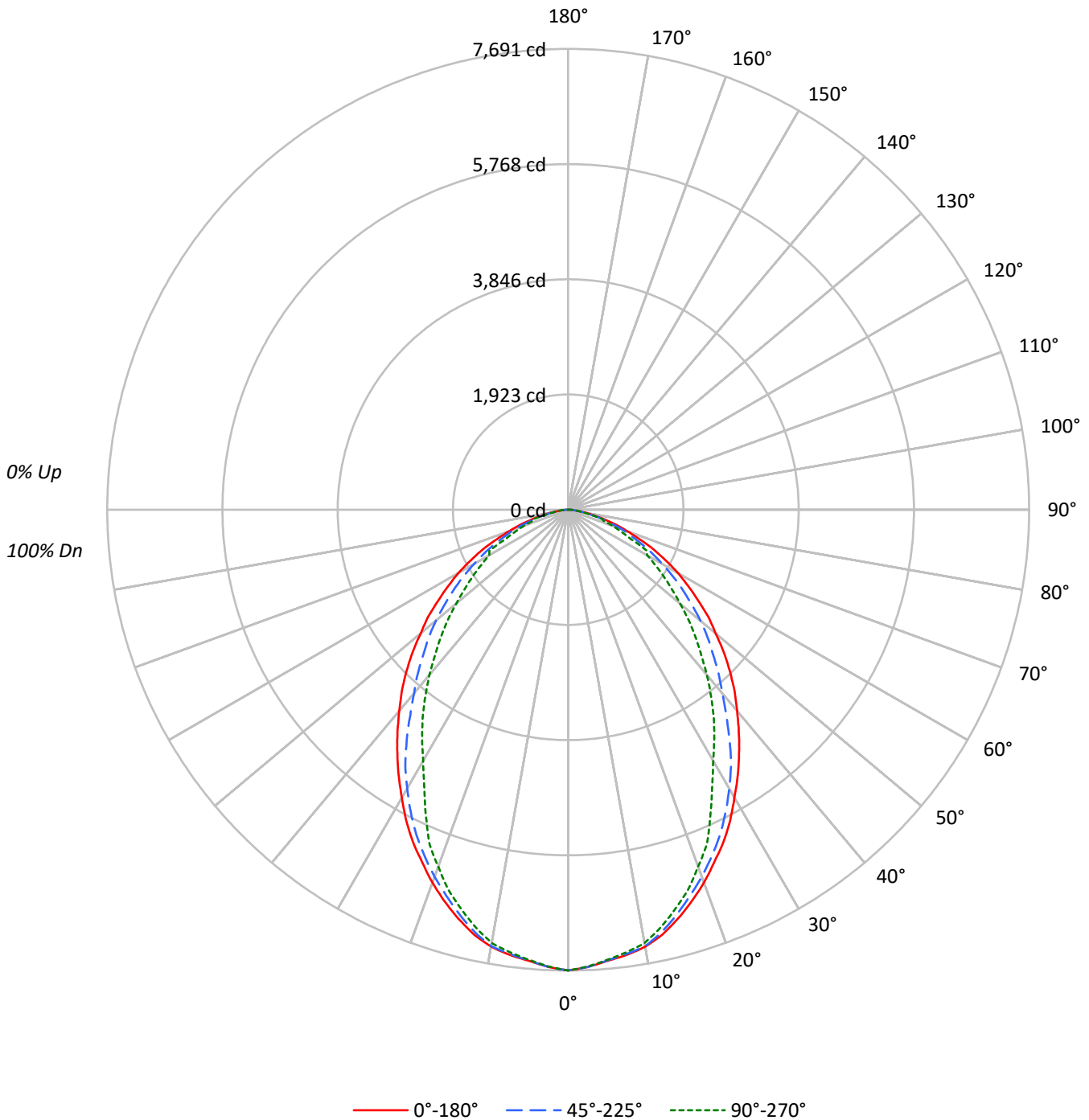
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10348	10348	10348
5°	10207	10195	10183
10°	10119	10107	10034
15°	9846	9747	9611
20°	9484	9331	9077
25°	9094	8896	8342
30°	8620	8343	7514
35°	8164	7711	6951
40°	7699	7027	6325
45°	7258	6496	5718
50°	6719	6030	5099
55°	6215	5464	4567
60°	5694	4881	4091
65°	5010	4274	3623
70°	4127	3742	3078
75°	3282	2865	3004
80°	2204	2066	1929
85°	1372	1647	1922

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7258 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	715.9	4.7
10°-20°	1964.7	13.0
20°-30°	2720.0	18.0
30°-40°	2900.4	19.2
40°-50°	2646.0	17.5
50°-60°	2072.9	13.7
60°-70°	1351.0	8.9
70°-80°	598.6	4.0
80°-90°	128.5	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°	5400.7	35.8
0°-40°	8301.0	55.0
0°-60°	13019.9	86.2
0°-90°	15098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15098.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7691	7691	7691	7691	7691	
5°	7557	7548	7548	7540	7540	717
15°	7068	7068	6997	6926	6899	1987
25°	6126	6090	5992	5779	5619	2812
35°	4970	4934	4694	4339	4232	3107
45°	3814	3734	3414	3130	3005	2938
55°	2650	2570	2329	2054	1947	2376
65°	1574	1485	1342	1369	1138	1551
75°	631	587	551	525	578	677
85°	89	98	107	116	124	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7690.7	7690.7	7690.7	7690.7	7690.7
2.5°	7637.4	7637.4	7637.4	7628.5	7628.5
5°	7557.4	7548.5	7548.5	7539.6	7539.6
7.5°	7495.1	7486.2	7477.3	7468.4	7450.7
10°	7406.2	7406.2	7397.3	7352.9	7344.0
12.5°	7264.0	7255.1	7219.5	7157.3	7139.5
15°	7068.3	7068.3	6997.2	6926.1	6899.4
17.5°	6855.0	6846.1	6757.2	6686.0	6650.5
20°	6623.8	6606.0	6517.1	6401.5	6339.3
22.5°	6366.0	6366.0	6259.3	6108.1	6045.9
25°	6125.9	6090.3	5992.5	5779.2	5619.1
27.5°	5850.3	5796.9	5690.2	5387.9	5201.2
30°	5548.0	5521.3	5370.2	4979.0	4836.7
32.5°	5263.5	5219.0	5059.0	4650.0	4534.4
35°	4970.1	4934.5	4694.5	4338.8	4232.1
37.5°	4676.7	4632.2	4329.9	4045.4	3912.0
40°	4383.3	4329.9	4001.0	3743.1	3600.9
42.5°	4107.6	4036.5	3716.4	3440.8	3280.8
45°	3814.2	3734.2	3414.1	3129.6	3005.2
47.5°	3520.8	3449.7	3156.3	2862.9	2720.6
50°	3209.7	3147.4	2880.7	2587.3	2436.1
52.5°	2951.8	2854.0	2596.2	2302.8	2178.3
55°	2649.5	2569.5	2329.4	2053.8	1947.1
57.5°	2373.9	2293.9	2071.6	1813.8	1724.9
60°	2116.1	2000.5	1813.8	1591.5	1520.4
62.5°	1831.5	1742.6	1582.6	1395.9	1484.8
65°	1573.7	1484.8	1342.5	1369.2	1138.0
67.5°	1289.2	1244.7	1120.3	995.8	960.2
70°	1049.1	995.8	951.3	818.0	782.4
72.5°	835.8	782.4	720.2	649.0	622.4
75°	631.3	586.8	551.2	524.6	577.9
77.5°	435.7	417.9	391.2	364.5	355.6
80°	284.5	275.6	266.7	257.8	248.9
82.5°	168.9	168.9	168.9	168.9	168.9
85°	88.9	97.8	106.7	115.6	124.5
87.5°	53.3	53.3	62.2	71.1	80.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)