

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: P564076

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564076
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-35-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12973.0 lumens
Efficiency: N/A
Efficacy: 97.4 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

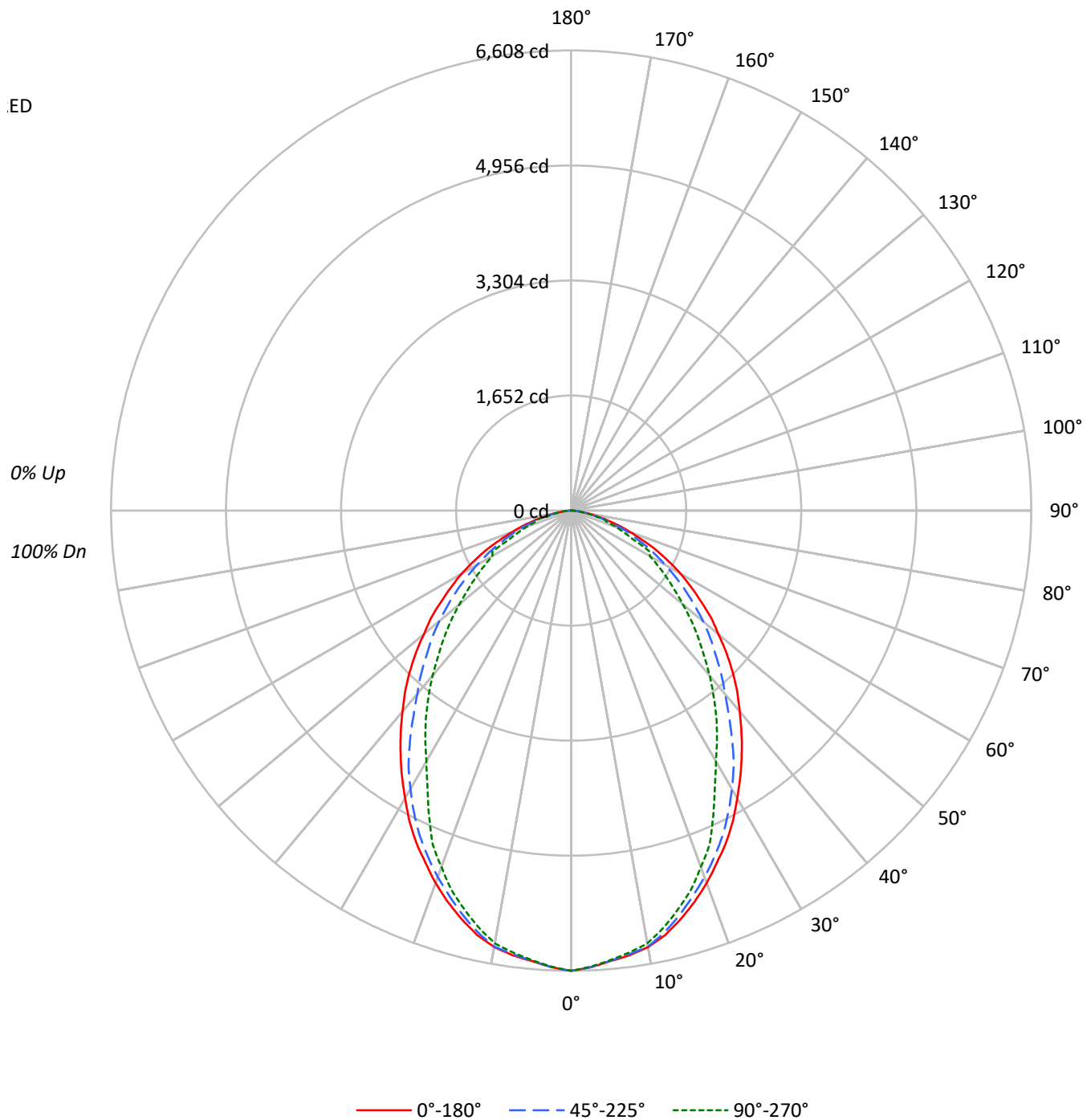
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8891	8891	8891
5°	8771	8760	8750
10°	8695	8684	8621
15°	8460	8375	8258
20°	8149	8018	7799
25°	7814	7644	7168
30°	7406	7169	6457
35°	7014	6626	5973
40°	6615	6038	5434
45°	6236	5582	4913
50°	5773	5181	4382
55°	5340	4695	3925
60°	4893	4194	3515
65°	4305	3673	3113
70°	3546	3216	2645
75°	2820	2463	2582
80°	1894	1776	1657
85°	1179	1416	1652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6236 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	615.1	4.7
10°-20°	1688.2	13.0
20°-30°	2337.2	18.0
30°-40°	2492.1	19.2
40°-50°	2273.6	17.5
50°-60°	1781.2	13.7
60°-70°	1160.9	8.9
70°-80°	514.3	4.0
80°-90°	110.4	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°	4640.5	35.8
0°-40°	7132.7	55.0
0°-60°	11187.4	86.2
0°-90°	12973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12973.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6608	6608	6608	6608	6608	
5°	6494	6486	6486	6478	6478	616
15°	6074	6074	6012	5951	5928	1707
25°	5264	5233	5149	4966	4828	2417
35°	4270	4240	4034	3728	3636	2670
45°	3277	3209	2934	2689	2582	2525
55°	2277	2208	2002	1765	1673	2042
65°	1352	1276	1154	1176	978	1333
75°	542	504	474	451	497	581
85°	76	84	92	99	107	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6608.3	6608.3	6608.3	6608.3	6608.3
2.5°	6562.4	6562.4	6562.4	6554.8	6554.8
5°	6493.7	6486.0	6486.0	6478.4	6478.4
7.5°	6440.2	6432.6	6424.9	6417.3	6402.0
10°	6363.8	6363.8	6356.2	6318.0	6310.3
12.5°	6241.6	6233.9	6203.4	6149.9	6134.6
15°	6073.5	6073.5	6012.4	5951.3	5928.3
17.5°	5890.1	5882.5	5806.1	5745.0	5714.4
20°	5691.5	5676.2	5599.8	5500.5	5447.1
22.5°	5470.0	5470.0	5378.3	5248.4	5194.9
25°	5263.7	5233.1	5149.1	4965.8	4828.2
27.5°	5026.9	4981.0	4889.4	4629.6	4469.2
30°	4767.1	4744.2	4614.3	4278.2	4156.0
32.5°	4522.7	4484.5	4346.9	3995.5	3896.2
35°	4270.5	4240.0	4033.7	3728.1	3636.5
37.5°	4018.4	3980.2	3720.5	3476.0	3361.4
40°	3766.3	3720.5	3437.8	3216.3	3094.0
42.5°	3529.5	3468.4	3193.4	2956.5	2819.0
45°	3277.4	3208.6	2933.6	2689.1	2582.2
47.5°	3025.3	2964.2	2712.1	2460.0	2337.7
50°	2757.9	2704.4	2475.2	2223.1	2093.3
52.5°	2536.4	2452.3	2230.8	1978.7	1871.7
55°	2276.6	2207.9	2001.6	1764.8	1673.1
57.5°	2039.8	1971.0	1780.0	1558.5	1482.1
60°	1818.2	1718.9	1558.5	1367.5	1306.4
62.5°	1573.8	1497.4	1359.9	1199.4	1275.8
65°	1352.2	1275.8	1153.6	1176.5	977.9
67.5°	1107.7	1069.5	962.6	855.6	825.1
70°	901.5	855.6	817.4	702.8	672.3
72.5°	718.1	672.3	618.8	557.7	534.8
75°	542.4	504.2	473.7	450.7	496.6
77.5°	374.3	359.1	336.1	313.2	305.6
80°	244.5	236.8	229.2	221.5	213.9
82.5°	145.2	145.2	145.2	145.2	145.2
85°	76.4	84.0	91.7	99.3	107.0
87.5°	45.8	45.8	53.5	61.1	68.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)