

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: P589869

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589869
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-35-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2398.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

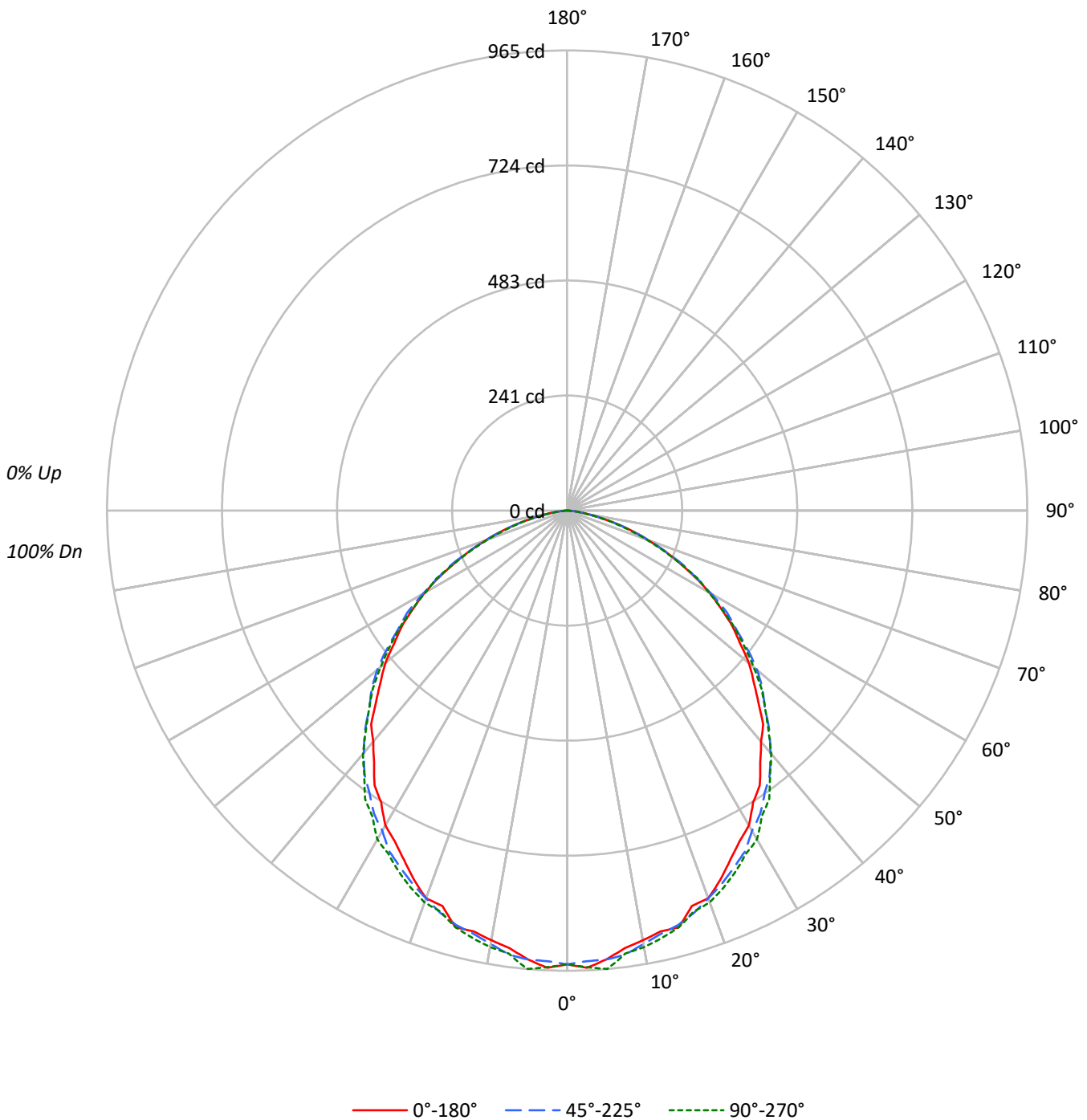
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2560	2560	2560
5°	2552	2553	2607
10°	2500	2522	2540
15°	2520	2506	2520
20°	2477	2477	2504
25°	2401	2454	2481
30°	2368	2410	2474
35°	2312	2373	2426
40°	2223	2329	2340
45°	2155	2232	2235
50°	2084	2179	2137
55°	1986	2025	2010
60°	1857	1876	1842
65°	1656	1698	1644
70°	1421	1426	1386
75°	1125	1123	1079
80°	753	733	705
85°	411	404	380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2289 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.7
10°-20°	253.7	10.6
20°-30°	380.0	15.8
30°-40°	450.4	18.8
40°-50°	451.2	18.8
50°-60°	383.0	16.0
60°-70°	258.2	10.8
70°-80°	113.5	4.7
80°-90°	18.4	0.8
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°	723.2	30.2
0°-40°	1173.6	48.9
0°-60°	2007.9	83.7
0°-90°	2398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	952	952	952	952	952	
5°	945	942	945	942	965	89
15°	904	894	900	904	905	252
25°	809	813	826	837	836	374
35°	704	706	722	739	739	437
45°	566	577	586	602	587	438
55°	423	420	432	429	428	377
65°	260	257	267	256	258	259
75°	108	106	108	100	104	116
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.5	951.5	951.5	951.5	951.5
2.5°	959.7	952.4	945.7	953.6	958.3
5°	944.7	942.5	945.1	942.3	965.0
7.5°	925.3	933.8	938.7	935.6	937.0
10°	915.0	912.0	923.0	930.6	929.5
12.5°	903.9	908.3	909.0	917.2	917.9
15°	904.5	894.1	899.6	904.3	904.7
17.5°	869.4	880.7	884.5	895.2	881.9
20°	865.1	856.9	865.1	876.0	874.3
22.5°	838.7	829.5	847.2	856.9	856.3
25°	808.7	813.1	826.4	837.2	835.5
27.5°	782.4	787.6	806.5	821.4	811.8
30°	762.2	759.6	775.5	788.8	796.2
32.5°	725.9	735.3	753.9	767.1	760.1
35°	703.9	706.0	722.4	739.1	738.6
37.5°	665.5	675.2	698.2	702.8	698.5
40°	632.7	642.4	663.1	668.2	666.1
42.5°	608.5	610.2	628.0	633.8	624.6
45°	566.3	576.9	586.5	601.6	587.3
47.5°	530.5	535.4	556.0	560.1	552.6
50°	497.9	499.6	520.4	515.4	510.4
52.5°	457.0	464.2	475.9	474.9	469.2
55°	423.3	420.5	431.6	428.6	428.5
57.5°	382.9	387.8	396.9	392.3	384.8
60°	345.1	345.2	348.5	343.2	342.3
62.5°	302.9	304.4	305.2	298.6	309.2
65°	260.1	256.6	266.7	256.5	258.2
67.5°	220.6	222.4	221.4	215.0	217.4
70°	180.6	182.8	181.2	174.0	176.2
72.5°	144.0	141.3	143.0	133.9	138.1
75°	108.2	106.0	108.0	100.4	103.8
77.5°	73.7	75.4	74.2	70.1	72.5
80°	48.6	47.3	47.3	45.0	45.5
82.5°	28.4	27.0	26.7	25.9	27.0
85°	13.3	12.9	13.1	12.8	12.3
87.5°	4.8	4.9	4.9	4.7	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)