

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: P589877

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-80-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589877
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-40-UNV-80-84-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2417.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

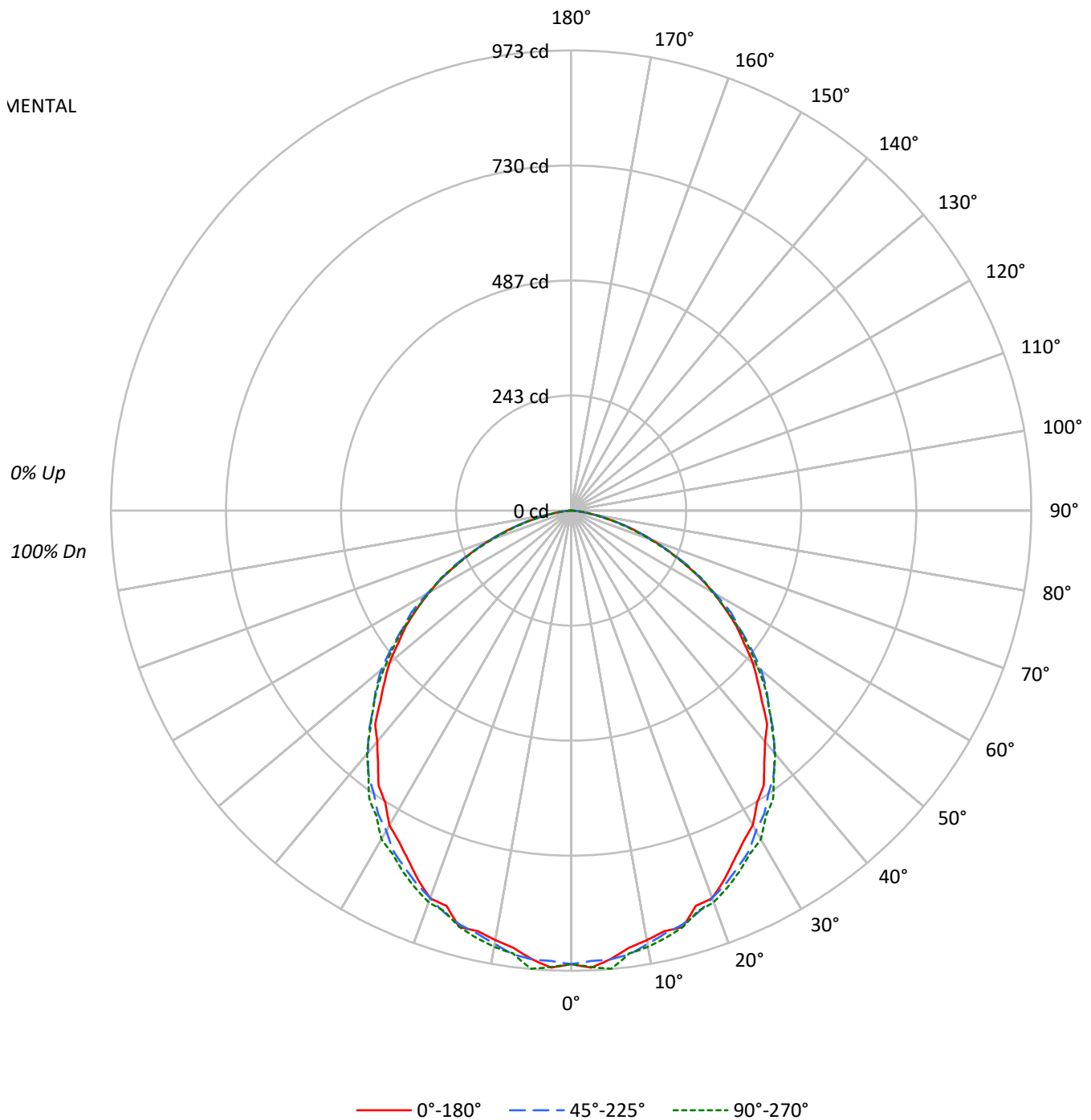
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2581	2581	2581
5°	2572	2573	2627
10°	2520	2542	2560
15°	2540	2526	2540
20°	2497	2497	2523
25°	2420	2473	2500
30°	2387	2429	2494
35°	2331	2392	2445
40°	2240	2348	2359
45°	2172	2250	2253
50°	2101	2196	2154
55°	2002	2041	2026
60°	1872	1891	1857
65°	1669	1712	1657
70°	1432	1437	1397
75°	1134	1131	1088
80°	759	739	710
85°	414	408	383

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2308 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	3.7
10°-20°	255.7	10.6
20°-30°	383.0	15.8
30°-40°	454.0	18.8
40°-50°	454.8	18.8
50°-60°	386.1	16.0
60°-70°	260.3	10.8
70°-80°	114.4	4.7
80°-90°	18.6	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°	728.9	30.2
0°-40°	1182.9	48.9
0°-60°	2023.8	83.7
0°-90°	2417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	952	950	953	950	973	90
15°	912	901	907	912	912	254
25°	815	820	833	844	842	377
35°	710	712	728	745	744	441
45°	571	582	591	606	592	442
55°	427	424	435	432	432	380
65°	262	259	269	258	260	261
75°	109	107	109	101	105	117
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°	959.0	959.0	959.0	959.0	959.0
2.5°	967.3	960.0	953.2	961.1	965.9
5°	952.2	950.0	952.6	949.7	972.6
7.5°	932.6	941.2	946.1	943.0	944.4
10°	922.2	919.3	930.3	938.0	936.8
12.5°	911.1	915.5	916.2	924.5	925.2
15°	911.7	901.2	906.8	911.5	911.8
17.5°	876.3	887.7	891.5	902.3	888.9
20°	872.0	863.7	872.0	883.0	881.2
22.5°	845.3	836.0	853.9	863.7	863.0
25°	815.1	819.6	833.0	843.8	842.1
27.5°	788.6	793.8	812.9	827.9	818.2
30°	768.2	765.6	781.7	795.1	802.5
32.5°	731.7	741.1	759.9	773.1	766.1
35°	709.5	711.6	728.1	744.9	744.4
37.5°	670.7	680.5	703.7	708.4	704.1
40°	637.7	647.5	668.4	673.5	671.4
42.5°	613.3	615.0	633.0	638.8	629.5
45°	570.8	581.5	591.1	606.4	592.0
47.5°	534.7	539.6	560.4	564.5	557.0
50°	501.9	503.6	524.5	519.4	514.5
52.5°	460.6	467.9	479.7	478.7	472.9
55°	426.7	423.8	435.0	432.0	431.9
57.5°	386.0	390.9	400.1	395.4	387.8
60°	347.8	347.9	351.3	346.0	345.0
62.5°	305.3	306.8	307.6	301.0	311.7
65°	262.1	258.7	268.8	258.5	260.3
67.5°	222.4	224.1	223.1	216.7	219.2
70°	182.0	184.2	182.6	175.3	177.6
72.5°	145.1	142.4	144.1	135.0	139.2
75°	109.1	106.9	108.8	101.2	104.6
77.5°	74.3	76.0	74.8	70.7	73.1
80°	49.0	47.7	47.7	45.3	45.8
82.5°	28.6	27.2	26.9	26.1	27.2
85°	13.4	13.0	13.2	12.9	12.4
87.5°	4.8	5.0	5.0	4.7	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)