

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: P590780

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590780
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-LD4-4HI-50-UNV-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9397.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

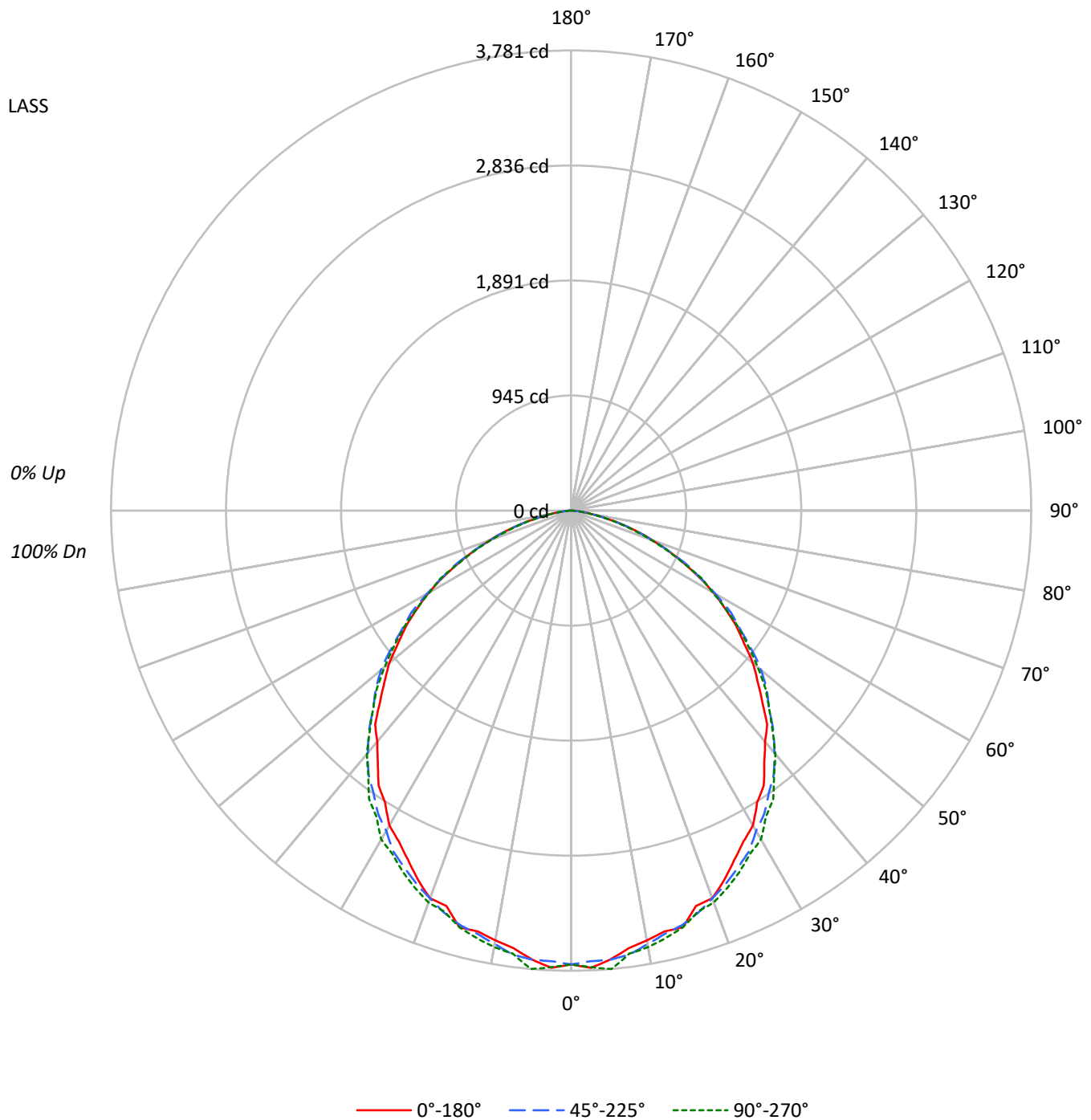
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10033	10033	10033
5°	10000	10004	10215
10°	9797	9883	9953
15°	9875	9821	9876
20°	9708	9708	9812
25°	9410	9615	9721
30°	9280	9443	9695
35°	9062	9299	9508
40°	8709	9128	9169
45°	8446	8746	8759
50°	8168	8537	8374
55°	7783	7934	7878
60°	7278	7350	7218
65°	6489	6655	6443
70°	5568	5587	5431
75°	4409	4400	4230
80°	2954	2872	2760
85°	1606	1590	1485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8971 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.7	3.7
10°-20°	994.0	10.6
20°-30°	1489.2	15.8
30°-40°	1765.0	18.8
40°-50°	1768.3	18.8
50°-60°	1501.0	16.0
60°-70°	1011.9	10.8
70°-80°	444.7	4.7
80°-90°	72.3	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°	2833.9	30.2
0°-40°	4598.9	48.9
0°-60°	7868.1	83.7
0°-90°	9397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9397.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3728	3728	3728	3728	3728	
5°	3702	3693	3704	3692	3781	349
15°	3545	3504	3525	3544	3545	988
25°	3169	3186	3238	3281	3274	1465
35°	2758	2767	2831	2896	2894	1713
45°	2219	2261	2298	2357	2302	1717
55°	1659	1648	1691	1680	1679	1476
65°	1019	1006	1045	1005	1012	1014
75°	424	416	423	393	407	454
85°	52	50	52	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3728.5	3728.5	3728.5	3728.5	3728.5
2.5°	3760.7	3732.3	3705.9	3736.7	3755.5
5°	3702.0	3693.3	3703.5	3692.4	3781.4
7.5°	3626.0	3659.2	3678.4	3666.4	3671.7
10°	3585.5	3574.0	3616.8	3646.7	3642.3
12.5°	3542.2	3559.5	3561.9	3594.2	3597.1
15°	3544.6	3503.7	3525.3	3543.6	3545.1
17.5°	3406.9	3451.2	3466.1	3508.0	3456.0
20°	3390.1	3357.8	3390.1	3432.9	3426.2
22.5°	3286.6	3250.5	3319.8	3357.8	3355.4
25°	3169.1	3186.4	3238.4	3280.8	3274.0
27.5°	3066.1	3086.3	3160.4	3218.7	3181.1
30°	2986.6	2976.5	3039.1	3091.1	3120.0
32.5°	2844.6	2881.2	2954.4	3005.9	2978.5
35°	2758.5	2766.6	2830.7	2896.1	2894.2
37.5°	2607.8	2645.8	2735.8	2754.1	2737.3
40°	2479.2	2517.3	2598.6	2618.4	2610.2
42.5°	2384.4	2391.1	2460.9	2483.6	2447.5
45°	2219.3	2260.7	2298.2	2357.4	2301.6
47.5°	2078.7	2098.0	2178.8	2194.7	2165.4
50°	1951.1	1957.9	2039.2	2019.5	2000.2
52.5°	1790.8	1819.2	1865.0	1861.1	1838.5
55°	1658.9	1647.9	1691.2	1679.6	1679.1
57.5°	1500.5	1519.8	1555.4	1537.1	1507.8
60°	1352.3	1352.8	1365.7	1345.0	1341.2
62.5°	1187.1	1192.9	1195.8	1170.3	1211.7
65°	1019.1	1005.7	1045.1	1005.2	1011.9
67.5°	864.6	871.3	867.5	842.5	852.1
70°	707.7	716.3	710.1	681.7	690.3
72.5°	564.2	553.6	560.4	524.7	541.1
75°	424.1	415.5	423.2	393.3	406.8
77.5°	288.8	295.6	290.8	274.9	284.0
80°	190.6	185.3	185.3	176.2	178.1
82.5°	111.2	105.9	104.5	101.6	105.9
85°	52.0	50.5	51.5	50.1	48.1
87.5°	18.8	19.3	19.3	18.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)