

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: P590775

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590775
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9529.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

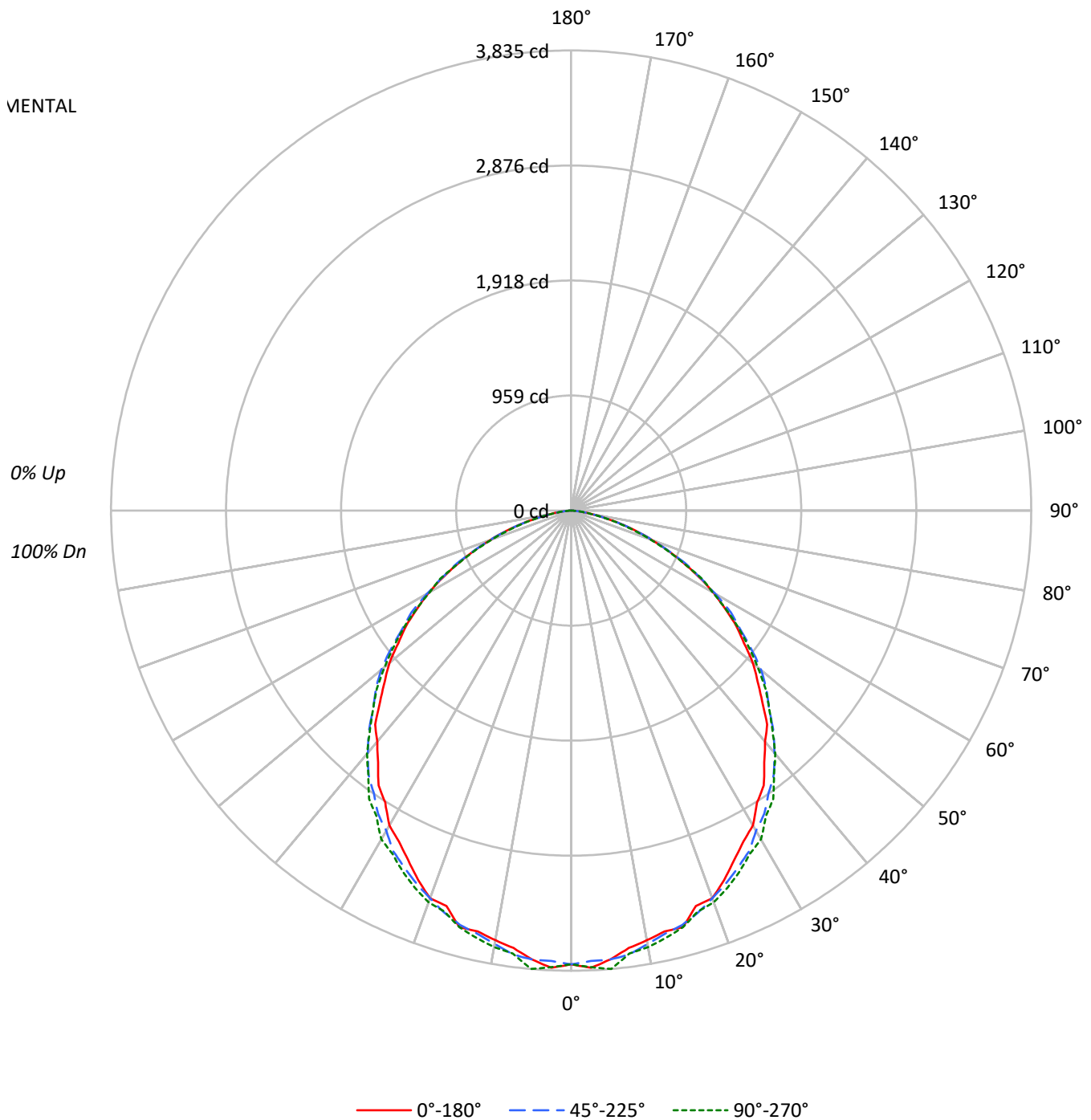
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10174	10174	10174
5°	10141	10145	10358
10°	9935	10022	10092
15°	10014	9959	10015
20°	9844	9844	9949
25°	9542	9750	9858
30°	9411	9576	9831
35°	9189	9429	9641
40°	8832	9257	9298
45°	8565	8869	8882
50°	8283	8657	8491
55°	7892	8046	7988
60°	7380	7453	7319
65°	6581	6748	6534
70°	5646	5665	5508
75°	4472	4461	4289
80°	2996	2912	2799
85°	1627	1612	1507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9098 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.6	3.7
10°-20°	1008.0	10.6
20°-30°	1510.1	15.8
30°-40°	1789.8	18.8
40°-50°	1793.1	18.8
50°-60°	1522.0	16.0
60°-70°	1026.2	10.8
70°-80°	450.9	4.7
80°-90°	73.3	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°	2873.7	30.2
0°-40°	4663.5	48.9
0°-60°	7978.6	83.7
0°-90°	9529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9529.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3781	3781	3781	3781	3781	
5°	3754	3745	3756	3744	3835	354
15°	3594	3553	3575	3593	3595	1001
25°	3214	3231	3284	3327	3320	1486
35°	2797	2806	2870	2937	2935	1737
45°	2250	2292	2330	2391	2334	1741
55°	1682	1671	1715	1703	1703	1496
65°	1034	1020	1060	1019	1026	1028
75°	430	421	429	399	412	461
85°	53	51	52	51	49	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3780.9	3780.9	3780.9	3780.9	3780.9
2.5°	3813.6	3784.8	3757.9	3789.2	3808.2
5°	3754.0	3745.2	3755.5	3744.3	3834.6
7.5°	3676.9	3710.6	3730.1	3717.9	3723.3
10°	3635.9	3624.2	3667.6	3697.9	3693.5
12.5°	3591.9	3609.5	3612.0	3644.7	3647.6
15°	3594.4	3552.9	3574.9	3593.4	3594.9
17.5°	3454.8	3499.7	3514.8	3557.3	3504.6
20°	3437.7	3405.0	3437.7	3481.1	3474.3
22.5°	3332.7	3296.1	3366.4	3405.0	3402.5
25°	3213.6	3231.2	3283.9	3326.9	3320.0
27.5°	3109.1	3129.6	3204.8	3263.9	3225.8
30°	3028.6	3018.3	3081.8	3134.5	3163.8
32.5°	2884.6	2921.7	2995.9	3048.1	3020.3
35°	2797.2	2805.5	2870.4	2936.8	2934.9
37.5°	2644.4	2683.0	2774.3	2792.8	2775.7
40°	2514.1	2552.6	2635.1	2655.1	2646.9
42.5°	2417.9	2424.7	2495.5	2518.5	2481.8
45°	2250.5	2292.4	2330.5	2390.6	2333.9
47.5°	2107.9	2127.4	2209.5	2225.6	2195.8
50°	1978.5	1985.4	2067.9	2047.9	2028.3
52.5°	1816.0	1844.8	1891.2	1887.3	1864.3
55°	1682.2	1671.0	1714.9	1703.2	1702.7
57.5°	1521.6	1541.1	1577.3	1558.7	1528.9
60°	1371.3	1371.8	1384.9	1363.9	1360.0
62.5°	1203.8	1209.7	1212.6	1186.7	1228.7
65°	1033.5	1019.8	1059.8	1019.3	1026.1
67.5°	876.8	883.6	879.7	854.3	864.1
70°	717.6	726.4	720.0	691.2	700.0
72.5°	572.1	561.4	568.2	532.1	548.7
75°	430.1	421.3	429.1	398.8	412.5
77.5°	292.9	299.7	294.9	278.7	288.0
80°	193.3	187.9	187.9	178.7	180.6
82.5°	112.8	107.4	105.9	103.0	107.4
85°	52.7	51.3	52.2	50.8	48.8
87.5°	19.0	19.5	19.5	18.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)