

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: P590728

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590728
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-35-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8348.0 lumens
Efficiency: N/A
Efficacy: 96.6 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

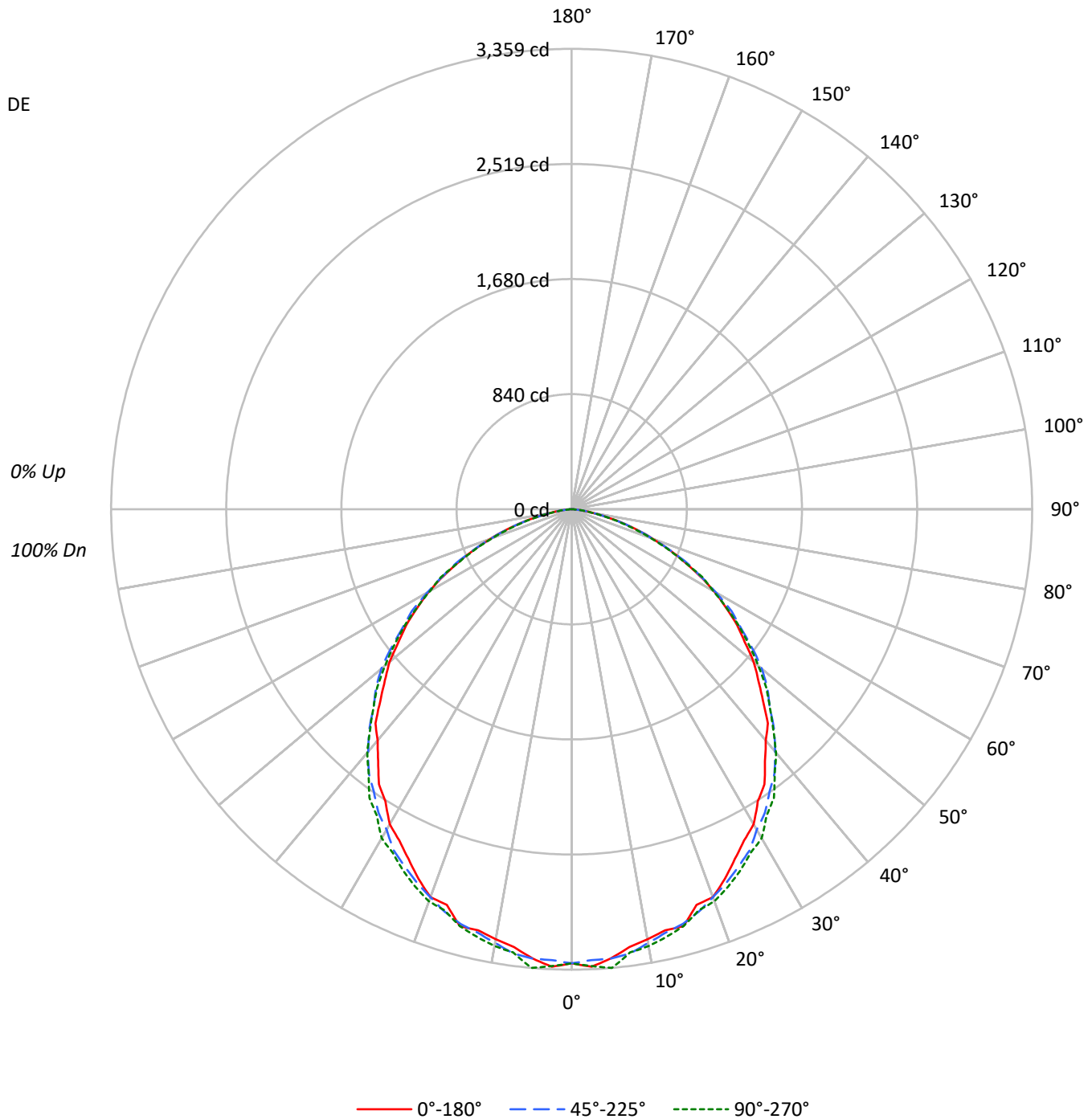
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8913	8913	8913
5°	8884	8887	9074
10°	8704	8780	8842
15°	8773	8725	8774
20°	8624	8624	8716
25°	8359	8542	8636
30°	8244	8389	8612
35°	8050	8261	8446
40°	7737	8109	8146
45°	7503	7770	7781
50°	7256	7584	7439
55°	6914	7049	6998
60°	6465	6530	6413
65°	5765	5912	5724
70°	4947	4963	4825
75°	3918	3908	3758
80°	2625	2552	2452
85°	1426	1414	1321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7970 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.6	3.7
10°-20°	883.0	10.6
20°-30°	1323.0	15.8
30°-40°	1568.0	18.8
40°-50°	1570.9	18.8
50°-60°	1333.4	16.0
60°-70°	899.0	10.8
70°-80°	395.0	4.7
80°-90°	64.2	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°	2517.6	30.2
0°-40°	4085.5	48.9
0°-60°	6989.8	83.7
0°-90°	8348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3312	3312	3312	3312	3312	
5°	3289	3281	3290	3280	3359	310
15°	3149	3113	3132	3148	3149	877
25°	2815	2831	2877	2914	2909	1302
35°	2450	2458	2515	2573	2571	1521
45°	1972	2008	2042	2094	2045	1525
55°	1474	1464	1502	1492	1492	1311
65°	905	893	928	893	899	900
75°	377	369	376	349	361	404
85°	46	45	46	44	43	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3312.3	3312.3	3312.3	3312.3	3312.3
2.5°	3340.9	3315.7	3292.2	3319.5	3336.2
5°	3288.8	3281.1	3290.0	3280.2	3359.3
7.5°	3221.2	3250.7	3267.8	3257.1	3261.8
10°	3185.3	3175.0	3213.1	3239.6	3235.7
12.5°	3146.8	3162.2	3164.3	3193.0	3195.5
15°	3148.9	3112.6	3131.8	3148.1	3149.3
17.5°	3026.6	3065.9	3079.2	3116.4	3070.2
20°	3011.6	2983.0	3011.6	3049.7	3043.7
22.5°	2919.7	2887.6	2949.2	2983.0	2980.8
25°	2815.3	2830.7	2876.9	2914.5	2908.6
27.5°	2723.8	2741.8	2807.6	2859.4	2826.0
30°	2653.2	2644.3	2699.9	2746.0	2771.7
32.5°	2527.1	2559.6	2624.6	2670.3	2646.0
35°	2450.5	2457.8	2514.7	2572.8	2571.1
37.5°	2316.7	2350.5	2430.4	2446.7	2431.7
40°	2202.5	2236.3	2308.5	2326.1	2318.8
42.5°	2118.2	2124.2	2186.2	2206.3	2174.3
45°	1971.5	2008.3	2041.7	2094.3	2044.7
47.5°	1846.7	1863.8	1935.6	1949.7	1923.6
50°	1733.3	1739.3	1811.6	1794.1	1777.0
52.5°	1590.9	1616.2	1656.8	1653.4	1633.3
55°	1473.7	1463.9	1502.4	1492.1	1491.7
57.5°	1333.0	1350.1	1381.8	1365.5	1339.5
60°	1201.3	1201.7	1213.3	1194.9	1191.5
62.5°	1054.6	1059.8	1062.3	1039.7	1076.4
65°	905.4	893.4	928.5	893.0	899.0
67.5°	768.1	774.1	770.7	748.4	757.0
70°	628.7	636.4	630.8	605.6	613.3
72.5°	501.2	491.8	497.8	466.2	480.7
75°	376.8	369.1	375.9	349.4	361.4
77.5°	256.6	262.6	258.3	244.2	252.3
80°	169.4	164.7	164.7	156.5	158.2
82.5°	98.8	94.1	92.8	90.2	94.1
85°	46.2	44.9	45.8	44.5	42.8
87.5°	16.7	17.1	17.1	16.3	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)