

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: P590789

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590789
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9145.0 lumens
Efficiency: N/A
Efficacy: 105.8 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

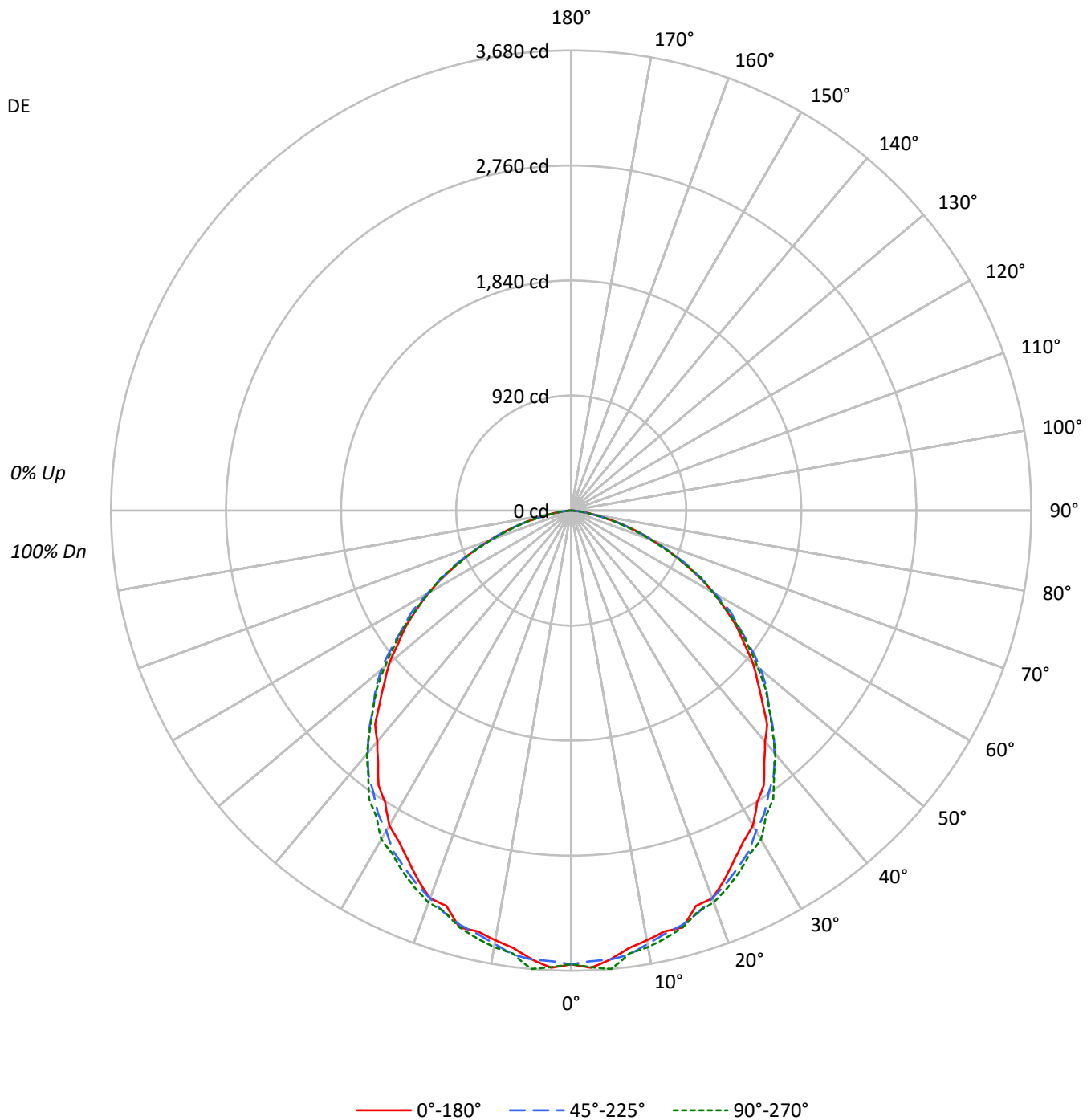
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	9764	9764	9764
5°	9732	9736	9941
10°	9535	9618	9686
15°	9610	9558	9611
20°	9448	9448	9548
25°	9157	9358	9460
30°	9032	9190	9435
35°	8819	9050	9253
40°	8476	8884	8923
45°	8219	8512	8524
50°	7949	8308	8149
55°	7574	7721	7667
60°	7083	7153	7025
65°	6315	6476	6271
70°	5419	5437	5286
75°	4291	4282	4116
80°	2875	2796	2686
85°	1562	1547	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8731 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.3	3.7
10°-20°	967.3	10.6
20°-30°	1449.3	15.8
30°-40°	1717.7	18.8
40°-50°	1720.9	18.8
50°-60°	1460.7	16.0
60°-70°	984.8	10.8
70°-80°	432.7	4.7
80°-90°	70.3	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°	2757.9	30.2
0°-40°	4475.6	48.9
0°-60°	7657.2	83.7
0°-90°	9145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9145.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3628	3628	3628	3628	3628	
5°	3603	3594	3604	3593	3680	340
15°	3450	3410	3431	3449	3450	961
25°	3084	3101	3152	3193	3186	1426
35°	2684	2692	2755	2818	2817	1667
45°	2160	2200	2237	2294	2240	1671
55°	1614	1604	1646	1635	1634	1436
65°	992	979	1017	978	985	986
75°	413	404	412	383	396	442
85°	51	49	50	49	47	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3628.5	3628.5	3628.5	3628.5	3628.5
2.5°	3659.9	3632.3	3606.5	3636.5	3654.7
5°	3602.7	3594.3	3604.1	3593.4	3680.0
7.5°	3528.7	3561.0	3579.8	3568.1	3573.2
10°	3489.4	3478.1	3519.8	3548.9	3544.6
12.5°	3447.2	3464.1	3466.4	3497.8	3500.6
15°	3449.5	3409.7	3430.8	3448.6	3450.0
17.5°	3315.5	3358.7	3373.2	3413.9	3363.3
20°	3299.2	3267.8	3299.2	3340.8	3334.3
22.5°	3198.4	3163.3	3230.8	3267.8	3265.4
25°	3084.1	3101.0	3151.6	3192.8	3186.2
27.5°	2983.9	3003.5	3075.7	3132.4	3095.8
30°	2906.6	2896.7	2957.6	3008.2	3036.3
32.5°	2768.3	2804.0	2875.2	2925.3	2898.6
35°	2684.5	2692.4	2754.8	2818.5	2816.6
37.5°	2537.8	2574.9	2662.5	2680.3	2663.9
40°	2412.8	2449.8	2528.9	2548.2	2540.2
42.5°	2320.5	2327.0	2395.0	2417.0	2381.8
45°	2159.8	2200.1	2236.6	2294.2	2239.9
47.5°	2023.0	2041.7	2120.4	2135.9	2107.3
50°	1898.8	1905.4	1984.6	1965.3	1946.6
52.5°	1742.8	1770.4	1815.0	1811.2	1789.2
55°	1614.4	1603.7	1645.8	1634.6	1634.1
57.5°	1460.3	1479.0	1513.7	1495.9	1467.3
60°	1316.0	1316.5	1329.1	1309.0	1305.2
62.5°	1155.3	1160.9	1163.7	1138.9	1179.2
65°	991.8	978.7	1017.1	978.2	984.8
67.5°	841.4	848.0	844.2	819.9	829.2
70°	688.7	697.1	691.0	663.4	671.8
72.5°	549.1	538.8	545.3	510.7	526.6
75°	412.7	404.3	411.8	382.8	395.9
77.5°	281.1	287.7	283.0	267.5	276.4
80°	185.5	180.4	180.4	171.5	173.3
82.5°	108.2	103.1	101.7	98.9	103.1
85°	50.6	49.2	50.1	48.7	46.8
87.5°	18.3	18.7	18.7	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)