

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: P590982

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590982
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-LD4-4STD-50-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7307.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

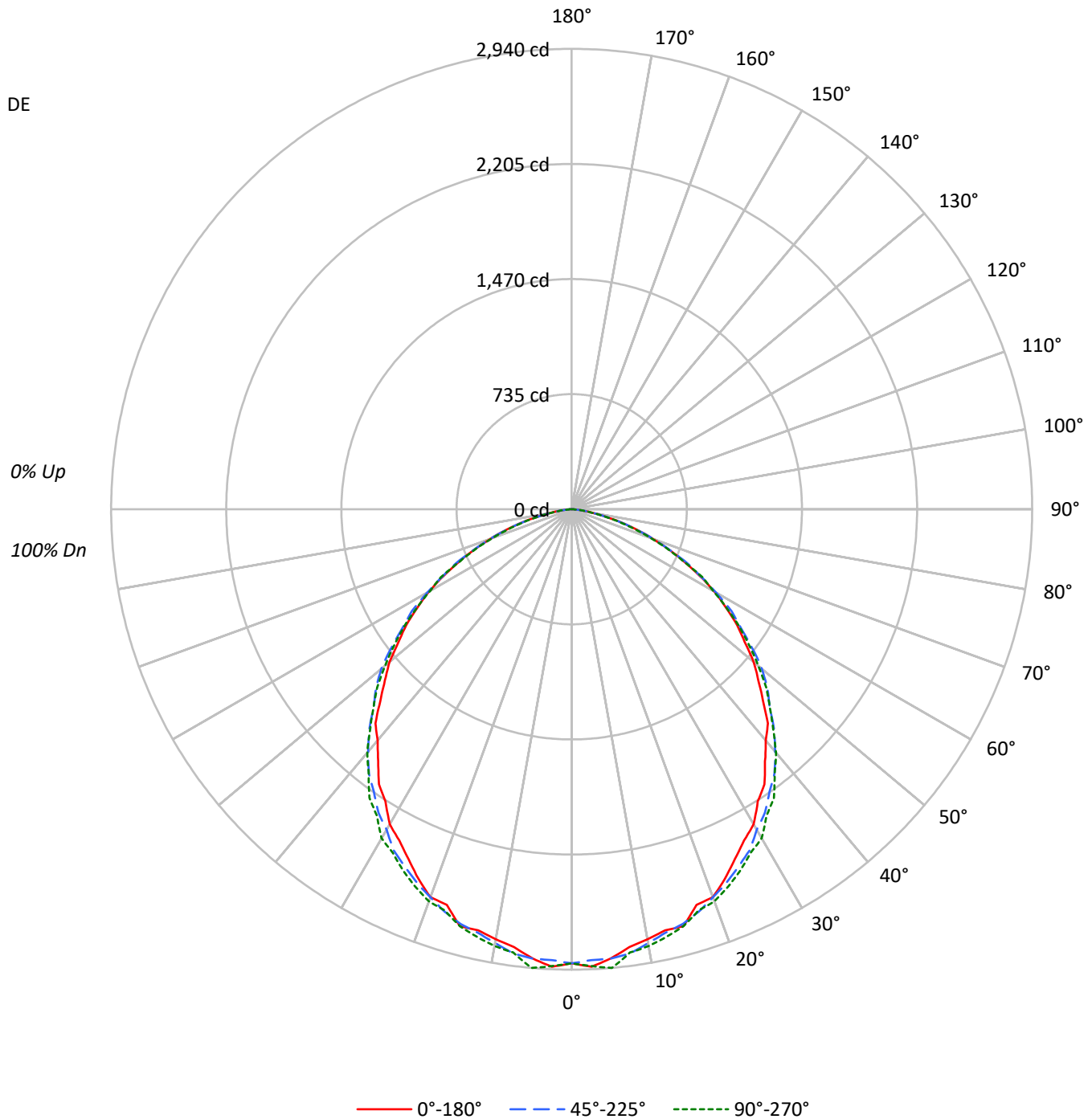
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7802	7802	7802
5°	7776	7779	7943
10°	7618	7685	7739
15°	7679	7637	7680
20°	7549	7549	7629
25°	7317	7477	7559
30°	7216	7343	7539
35°	7046	7231	7393
40°	6772	7098	7130
45°	6567	6801	6811
50°	6352	6638	6512
55°	6052	6169	6126
60°	5659	5716	5613
65°	5046	5175	5011
70°	4330	4344	4223
75°	3429	3421	3289
80°	2297	2233	2146
85°	1247	1238	1155

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6976 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.7	3.7
10°-20°	772.9	10.6
20°-30°	1158.0	15.8
30°-40°	1372.5	18.8
40°-50°	1375.0	18.8
50°-60°	1167.1	16.0
60°-70°	786.9	10.8
70°-80°	345.7	4.7
80°-90°	56.2	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°	2203.6	30.2
0°-40°	3576.1	48.9
0°-60°	6118.2	83.7
0°-90°	7307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7307.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2899	2899	2899	2899	2899	
5°	2879	2872	2880	2871	2940	271
15°	2756	2724	2741	2756	2757	768
25°	2464	2478	2518	2551	2546	1139
35°	2145	2151	2201	2252	2250	1332
45°	1726	1758	1787	1833	1790	1335
55°	1290	1281	1315	1306	1306	1147
65°	792	782	813	782	787	788
75°	330	323	329	306	316	353
85°	40	39	40	39	37	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2899.2	2899.2	2899.2	2899.2	2899.2
2.5°	2924.3	2902.2	2881.6	2905.6	2920.2
5°	2878.6	2871.9	2879.8	2871.2	2940.4
7.5°	2819.5	2845.3	2860.3	2850.9	2855.1
10°	2788.1	2779.1	2812.4	2835.6	2832.2
12.5°	2754.4	2767.8	2769.7	2794.8	2797.0
15°	2756.2	2724.4	2741.3	2755.5	2756.6
17.5°	2649.2	2683.6	2695.2	2727.8	2687.4
20°	2636.1	2611.0	2636.1	2669.4	2664.1
22.5°	2555.6	2527.5	2581.4	2611.0	2609.1
25°	2464.3	2477.7	2518.2	2551.1	2545.9
27.5°	2384.1	2399.9	2457.5	2502.8	2473.6
30°	2322.4	2314.5	2363.2	2403.6	2426.1
32.5°	2212.0	2240.4	2297.3	2337.4	2316.0
35°	2144.9	2151.3	2201.1	2252.0	2250.5
37.5°	2027.8	2057.4	2127.4	2141.6	2128.5
40°	1927.8	1957.4	2020.7	2036.0	2029.7
42.5°	1854.1	1859.3	1913.6	1931.2	1903.1
45°	1725.7	1757.9	1787.1	1833.1	1789.7
47.5°	1616.4	1631.4	1694.2	1706.6	1683.8
50°	1517.2	1522.4	1585.7	1570.3	1555.4
52.5°	1392.5	1414.6	1450.2	1447.2	1429.6
55°	1290.0	1281.4	1315.0	1306.1	1305.7
57.5°	1166.8	1181.8	1209.5	1195.3	1172.4
60°	1051.5	1051.9	1062.0	1045.9	1042.9
62.5°	923.1	927.6	929.9	910.0	942.2
65°	792.5	782.0	812.7	781.6	786.9
67.5°	672.3	677.5	674.6	655.1	662.6
70°	550.3	557.0	552.1	530.1	536.8
72.5°	438.7	430.5	435.7	408.0	420.8
75°	329.8	323.1	329.0	305.8	316.3
77.5°	224.6	229.8	226.1	213.7	220.9
80°	148.2	144.1	144.1	137.0	138.5
82.5°	86.5	82.4	81.2	79.0	82.4
85°	40.4	39.3	40.1	38.9	37.4
87.5°	14.6	15.0	15.0	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)