

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: P590502

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590502
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-LD4-3HI-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: 6722.0 lumens
Efficiency: N/A
Efficacy: 103.7 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

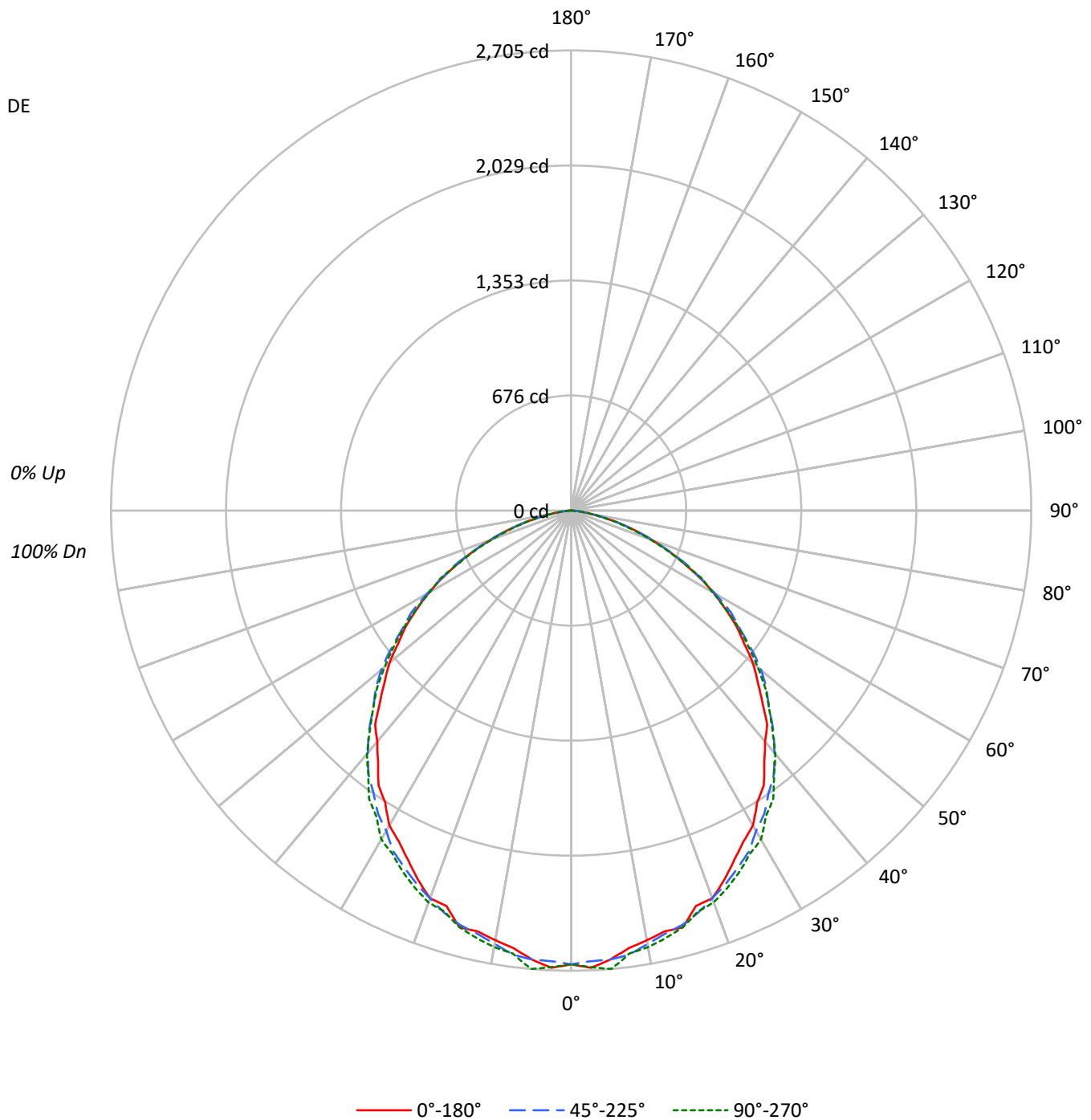
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7177	7177	7177
5°	7153	7156	7307
10°	7008	7070	7120
15°	7064	7025	7065
20°	6944	6944	7019
25°	6731	6878	6954
30°	6639	6755	6935
35°	6482	6652	6801
40°	6230	6530	6559
45°	6041	6256	6266
50°	5843	6107	5990
55°	5567	5676	5636
60°	5206	5258	5163
65°	4642	4760	4609
70°	3983	3996	3885
75°	3154	3147	3026
80°	2114	2055	1974
85°	1149	1136	1062

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6418 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.9	3.7
10°-20°	711.0	10.6
20°-30°	1065.3	15.8
30°-40°	1262.6	18.8
40°-50°	1264.9	18.8
50°-60°	1073.7	16.0
60°-70°	723.9	10.8
70°-80°	318.1	4.7
80°-90°	51.7	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°	2027.2	30.2
0°-40°	3289.8	48.9
0°-60°	5628.4	83.7
0°-90°	6722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2667	2667	2667	2667	2667	
5°	2648	2642	2649	2641	2705	250
15°	2536	2506	2522	2535	2536	706
25°	2267	2279	2317	2347	2342	1048
35°	1973	1979	2025	2072	2070	1225
45°	1588	1617	1644	1686	1646	1228
55°	1187	1179	1210	1202	1201	1056
65°	729	719	748	719	724	725
75°	303	297	303	281	291	325
85°	37	36	37	36	34	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2667.1	2667.1	2667.1	2667.1	2667.1
2.5°	2690.2	2669.9	2650.9	2673.0	2686.4
5°	2648.2	2642.0	2649.2	2641.3	2705.0
7.5°	2593.8	2617.5	2631.3	2622.7	2626.5
10°	2564.8	2556.6	2587.2	2608.6	2605.5
12.5°	2533.8	2546.2	2548.0	2571.0	2573.1
15°	2535.6	2506.3	2521.8	2534.9	2535.9
17.5°	2437.1	2468.8	2479.4	2509.4	2472.2
20°	2425.0	2402.0	2425.0	2455.7	2450.9
22.5°	2351.0	2325.2	2374.8	2402.0	2400.2
25°	2267.0	2279.4	2316.6	2346.9	2342.0
27.5°	2193.3	2207.7	2260.8	2302.4	2275.6
30°	2136.5	2129.2	2174.0	2211.2	2231.8
32.5°	2034.9	2061.0	2113.4	2150.2	2130.6
35°	1973.2	1979.1	2024.9	2071.7	2070.3
37.5°	1865.4	1892.6	1957.0	1970.1	1958.1
40°	1773.5	1800.7	1858.9	1873.0	1867.2
42.5°	1705.6	1710.5	1760.4	1776.6	1750.8
45°	1587.5	1617.1	1644.0	1686.4	1646.4
47.5°	1487.0	1500.7	1558.6	1570.0	1549.0
50°	1395.7	1400.5	1458.7	1444.6	1430.8
52.5°	1281.0	1301.4	1334.1	1331.3	1315.1
55°	1186.7	1178.8	1209.8	1201.5	1201.2
57.5°	1073.4	1087.2	1112.6	1099.6	1078.6
60°	967.3	967.7	977.0	962.2	959.4
62.5°	849.2	853.3	855.4	837.2	866.8
65°	729.0	719.4	747.6	719.0	723.9
67.5°	618.5	623.3	620.5	602.6	609.5
70°	506.2	512.4	507.9	487.6	493.8
72.5°	403.6	396.0	400.8	375.4	387.1
75°	303.4	297.2	302.7	281.3	291.0
77.5°	206.6	211.4	208.0	196.6	203.2
80°	136.4	132.6	132.6	126.0	127.4
82.5°	79.5	75.8	74.7	72.7	75.8
85°	37.2	36.2	36.8	35.8	34.4
87.5°	13.4	13.8	13.8	13.1	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)