

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: P590439

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590439
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-35-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6471.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

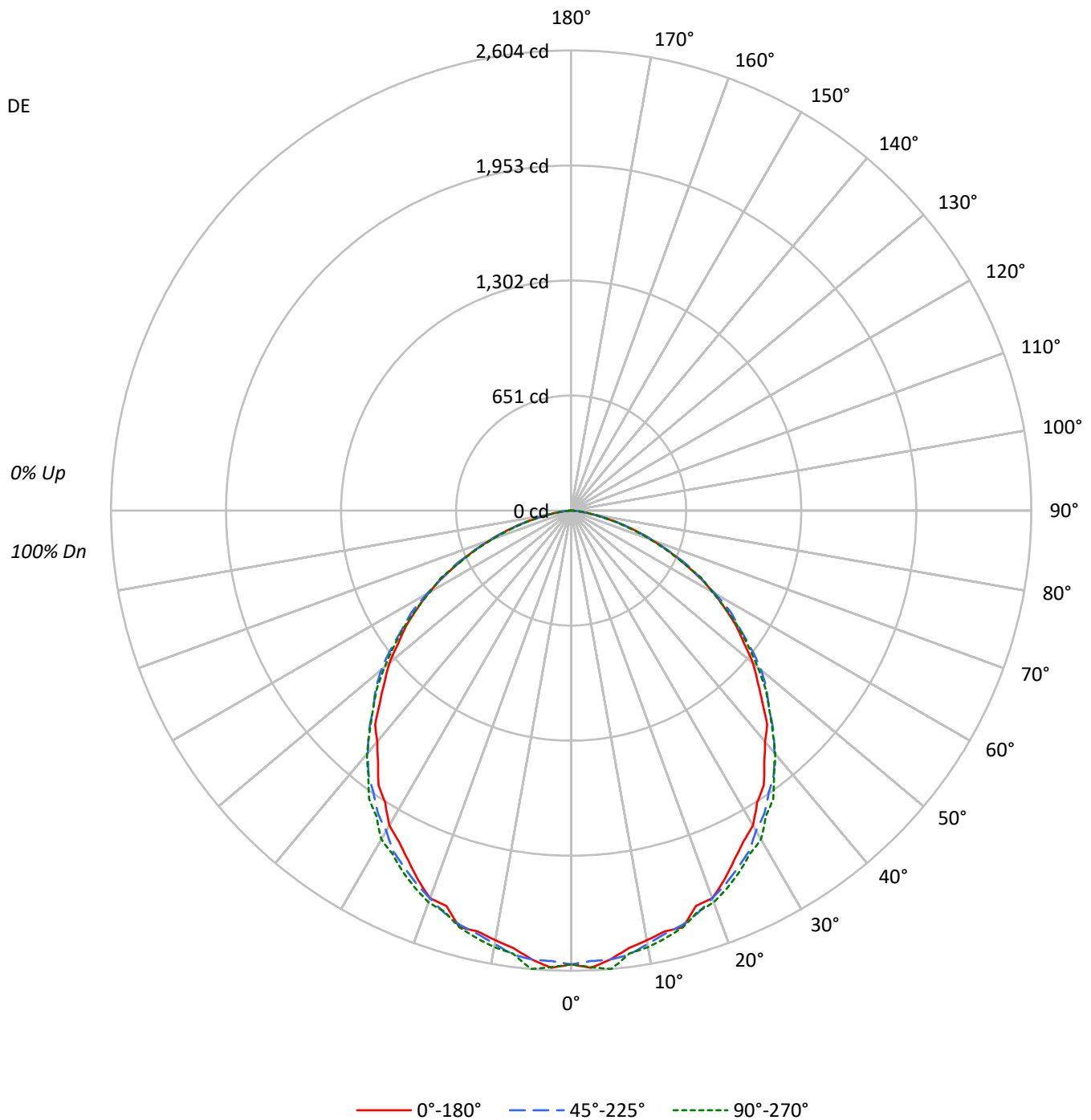
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6909	6909	6909
5°	6886	6889	7034
10°	6747	6806	6854
15°	6800	6763	6801
20°	6685	6685	6756
25°	6480	6622	6694
30°	6391	6503	6676
35°	6240	6404	6547
40°	5997	6286	6314
45°	5816	6023	6032
50°	5625	5879	5766
55°	5360	5464	5425
60°	5012	5062	4971
65°	4469	4583	4437
70°	3834	3847	3740
75°	3037	3030	2912
80°	2035	1977	1901
85°	1105	1096	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6178 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.5	3.7
10°-20°	684.5	10.6
20°-30°	1025.5	15.8
30°-40°	1215.4	18.8
40°-50°	1217.7	18.8
50°-60°	1033.6	16.0
60°-70°	696.9	10.8
70°-80°	306.2	4.7
80°-90°	49.8	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°	1951.5	30.2
0°-40°	3166.9	48.9
0°-60°	5418.2	83.7
0°-90°	6471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2568	2568	2568	2568	2568	
5°	2549	2543	2550	2543	2604	240
15°	2441	2413	2428	2440	2441	680
25°	2182	2194	2230	2259	2255	1009
35°	1900	1905	1949	1994	1993	1179
45°	1528	1557	1583	1623	1585	1182
55°	1142	1135	1165	1157	1156	1016
65°	702	692	720	692	697	698
75°	292	286	291	271	280	313
85°	36	35	36	34	33	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2567.5	2567.5	2567.5	2567.5	2567.5
2.5°	2589.7	2570.2	2551.9	2573.2	2586.1
5°	2549.3	2543.3	2550.3	2542.7	2604.0
7.5°	2496.9	2519.8	2533.1	2524.8	2528.4
10°	2469.1	2461.1	2490.6	2511.2	2508.2
12.5°	2439.2	2451.2	2452.8	2475.0	2477.0
15°	2440.9	2412.7	2427.6	2440.2	2441.2
17.5°	2346.1	2376.6	2386.9	2415.7	2379.9
20°	2334.5	2312.3	2334.5	2364.0	2359.3
22.5°	2263.2	2238.3	2286.1	2312.3	2310.6
25°	2182.3	2194.3	2230.1	2259.2	2254.6
27.5°	2111.4	2125.3	2176.3	2216.5	2190.6
30°	2056.7	2049.7	2092.8	2128.6	2148.5
32.5°	1958.9	1984.1	2034.5	2069.9	2051.0
35°	1899.5	1905.2	1949.3	1994.4	1993.0
37.5°	1795.8	1822.0	1884.0	1896.6	1885.0
40°	1707.3	1733.5	1789.5	1803.1	1797.4
42.5°	1642.0	1646.6	1694.7	1710.2	1685.4
45°	1528.3	1556.8	1582.6	1623.4	1584.9
47.5°	1431.5	1444.7	1500.4	1511.3	1491.1
50°	1343.6	1348.2	1404.3	1390.7	1377.4
52.5°	1233.2	1252.8	1284.3	1281.6	1266.0
55°	1142.4	1134.8	1164.6	1156.6	1156.3
57.5°	1033.3	1046.6	1071.1	1058.5	1038.3
60°	931.2	931.5	940.5	926.2	923.6
62.5°	817.5	821.5	823.5	805.9	834.4
65°	701.8	692.5	719.7	692.2	696.8
67.5°	595.4	600.0	597.4	580.1	586.8
70°	487.3	493.3	489.0	469.4	475.4
72.5°	388.5	381.2	385.9	361.3	372.6
75°	292.1	286.1	291.4	270.8	280.1
77.5°	198.9	203.5	200.2	189.3	195.6
80°	131.3	127.6	127.6	121.3	122.7
82.5°	76.6	72.9	71.9	69.9	72.9
85°	35.8	34.8	35.5	34.5	33.2
87.5°	12.9	13.3	13.3	12.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)