

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: P590438

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590438
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6545.0 lumens
Efficiency: N/A
Efficacy: 101.0 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

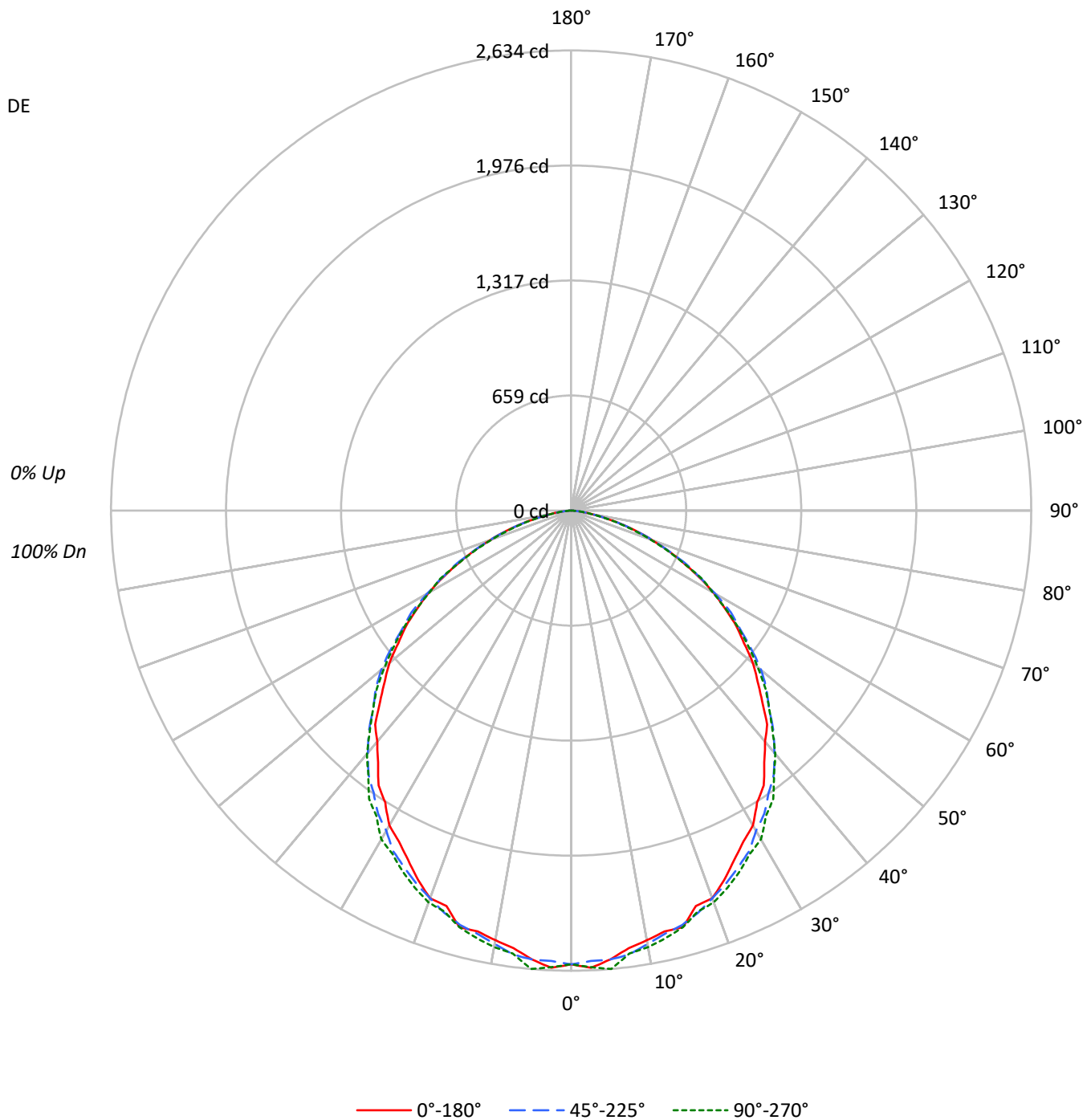
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6988	6988	6988
5°	6965	6968	7115
10°	6824	6883	6932
15°	6878	6841	6879
20°	6762	6762	6834
25°	6554	6697	6771
30°	6464	6577	6752
35°	6312	6477	6622
40°	6066	6358	6386
45°	5882	6092	6101
50°	5689	5946	5833
55°	5421	5526	5487
60°	5069	5119	5027
65°	4520	4635	4488
70°	3878	3891	3783
75°	3071	3064	2946
80°	2058	2001	1923
85°	1118	1108	1034

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6249 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.3	3.7
10°-20°	692.3	10.6
20°-30°	1037.2	15.8
30°-40°	1229.3	18.8
40°-50°	1231.6	18.8
50°-60°	1045.4	16.0
60°-70°	704.8	10.8
70°-80°	309.7	4.7
80°-90°	50.3	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°	1973.8	30.2
0°-40°	3203.1	48.9
0°-60°	5480.1	83.7
0°-90°	6545.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6545.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2597	2597	2597	2597	2597	
5°	2578	2572	2580	2572	2634	243
15°	2469	2440	2455	2468	2469	688
25°	2207	2219	2256	2285	2280	1020
35°	1921	1927	1972	2017	2016	1193
45°	1546	1575	1601	1642	1603	1196
55°	1155	1148	1178	1170	1170	1028
65°	710	700	728	700	705	706
75°	295	289	295	274	283	317
85°	36	35	36	35	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2596.9	2596.9	2596.9	2596.9	2596.9
2.5°	2619.4	2599.6	2581.1	2602.6	2615.7
5°	2578.4	2572.4	2579.5	2571.7	2633.8
7.5°	2525.5	2548.6	2562.0	2553.6	2557.3
10°	2497.3	2489.3	2519.1	2539.9	2536.9
12.5°	2467.1	2479.2	2480.9	2503.3	2505.4
15°	2468.8	2440.3	2455.4	2468.1	2469.1
17.5°	2372.9	2403.8	2414.2	2443.3	2407.1
20°	2361.2	2338.7	2361.2	2391.0	2386.3
22.5°	2289.1	2263.9	2312.2	2338.7	2337.0
25°	2207.3	2219.3	2255.6	2285.1	2280.4
27.5°	2135.5	2149.6	2201.2	2241.8	2215.7
30°	2080.2	2073.2	2116.7	2153.0	2173.1
32.5°	1981.3	2006.8	2057.7	2093.6	2074.5
35°	1921.3	1927.0	1971.6	2017.2	2015.8
37.5°	1816.3	1842.8	1905.5	1918.2	1906.5
40°	1726.8	1753.3	1809.9	1823.7	1818.0
42.5°	1660.7	1665.4	1714.0	1729.8	1704.7
45°	1545.7	1574.6	1600.7	1642.0	1603.1
47.5°	1447.8	1461.2	1517.6	1528.6	1508.2
50°	1359.0	1363.7	1420.3	1406.6	1393.2
52.5°	1247.3	1267.1	1298.9	1296.3	1280.5
55°	1155.4	1147.7	1177.9	1169.9	1169.5
57.5°	1045.1	1058.5	1083.4	1070.6	1050.2
60°	941.9	942.2	951.2	936.8	934.1
62.5°	826.8	830.9	832.9	815.1	843.9
65°	709.8	700.4	727.9	700.1	704.8
67.5°	602.2	606.9	604.2	586.8	593.5
70°	492.9	498.9	494.6	474.8	480.8
72.5°	393.0	385.6	390.3	365.5	376.9
75°	295.4	289.4	294.7	273.9	283.3
77.5°	201.2	205.9	202.5	191.5	197.8
80°	132.8	129.1	129.1	122.7	124.1
82.5°	77.5	73.8	72.8	70.7	73.8
85°	36.2	35.2	35.9	34.9	33.5
87.5°	13.1	13.4	13.4	12.7	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)