

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: P590504

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590504
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-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6431.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

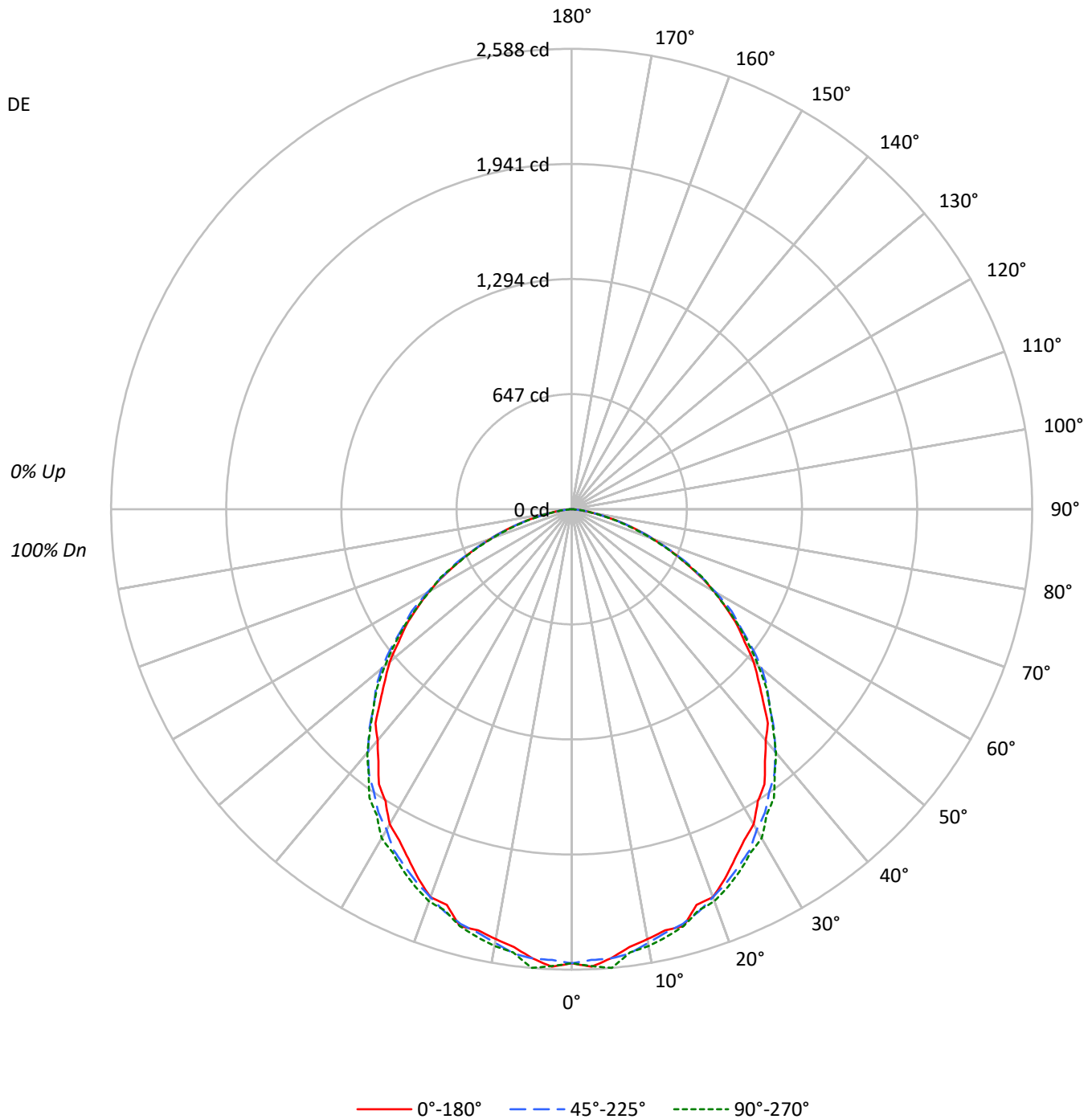
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	6867	6867	6867
5°	6844	6846	6991
10°	6705	6763	6811
15°	6758	6721	6759
20°	6644	6644	6715
25°	6440	6581	6653
30°	6351	6463	6635
35°	6202	6364	6507
40°	5960	6247	6275
45°	5780	5985	5994
50°	5590	5843	5731
55°	5326	5430	5392
60°	4980	5031	4940
65°	4441	4555	4409
70°	3810	3824	3717
75°	3018	3011	2895
80°	2022	1965	1889
85°	1099	1090	1016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6140 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.0	3.7
10°-20°	680.3	10.6
20°-30°	1019.2	15.8
30°-40°	1207.9	18.8
40°-50°	1210.1	18.8
50°-60°	1027.2	16.0
60°-70°	692.5	10.8
70°-80°	304.3	4.7
80°-90°	49.5	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°	1939.4	30.2
0°-40°	3147.3	48.9
0°-60°	5384.7	83.7
0°-90°	6431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2552	2552	2552	2552	2552	
5°	2534	2528	2534	2527	2588	239
15°	2426	2398	2413	2425	2426	676
25°	2169	2181	2216	2245	2241	1003
35°	1888	1893	1937	1982	1981	1172
45°	1519	1547	1573	1613	1575	1175
55°	1135	1128	1157	1150	1149	1010
65°	698	688	715	688	692	694
75°	290	284	290	269	278	311
85°	36	35	35	34	33	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2551.7	2551.7	2551.7	2551.7	2551.7
2.5°	2573.7	2554.3	2536.2	2557.3	2570.1
5°	2533.5	2527.6	2534.5	2526.9	2587.9
7.5°	2481.5	2504.2	2517.4	2509.2	2512.8
10°	2453.8	2445.9	2475.2	2495.7	2492.7
12.5°	2424.2	2436.0	2437.7	2459.7	2461.7
15°	2425.8	2397.8	2412.6	2425.1	2426.1
17.5°	2331.6	2361.9	2372.1	2400.8	2365.2
20°	2320.0	2298.0	2320.0	2349.4	2344.8
22.5°	2249.2	2224.5	2271.9	2298.0	2296.3
25°	2168.8	2180.7	2216.3	2245.3	2240.6
27.5°	2098.3	2112.2	2162.9	2202.8	2177.1
30°	2044.0	2037.0	2079.9	2115.5	2135.2
32.5°	1946.8	1971.8	2021.9	2057.1	2038.4
35°	1887.8	1893.4	1937.2	1982.0	1980.7
37.5°	1784.7	1810.7	1872.3	1884.8	1873.3
40°	1696.7	1722.7	1778.4	1791.9	1786.3
42.5°	1631.8	1636.4	1684.2	1699.7	1675.0
45°	1518.8	1547.1	1572.8	1613.4	1575.1
47.5°	1422.6	1435.8	1491.1	1502.0	1481.9
50°	1335.3	1339.9	1395.6	1382.1	1368.9
52.5°	1225.6	1245.0	1276.3	1273.7	1258.2
55°	1135.3	1127.7	1157.4	1149.5	1149.2
57.5°	1026.9	1040.1	1064.5	1052.0	1031.9
60°	925.4	925.8	934.7	920.5	917.9
62.5°	812.4	816.4	818.4	800.9	829.2
65°	697.5	688.2	715.3	687.9	692.5
67.5°	591.7	596.3	593.7	576.6	583.1
70°	484.3	490.2	486.0	466.5	472.4
72.5°	386.1	378.9	383.5	359.1	370.3
75°	290.3	284.3	289.6	269.2	278.4
77.5°	197.7	202.3	199.0	188.1	194.4
80°	130.5	126.8	126.8	120.6	121.9
82.5°	76.1	72.5	71.5	69.5	72.5
85°	35.6	34.6	35.3	34.3	32.9
87.5°	12.8	13.2	13.2	12.5	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)