

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: P590977

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590977
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6430.0 lumens
Efficiency: N/A
Efficacy: 96.5 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

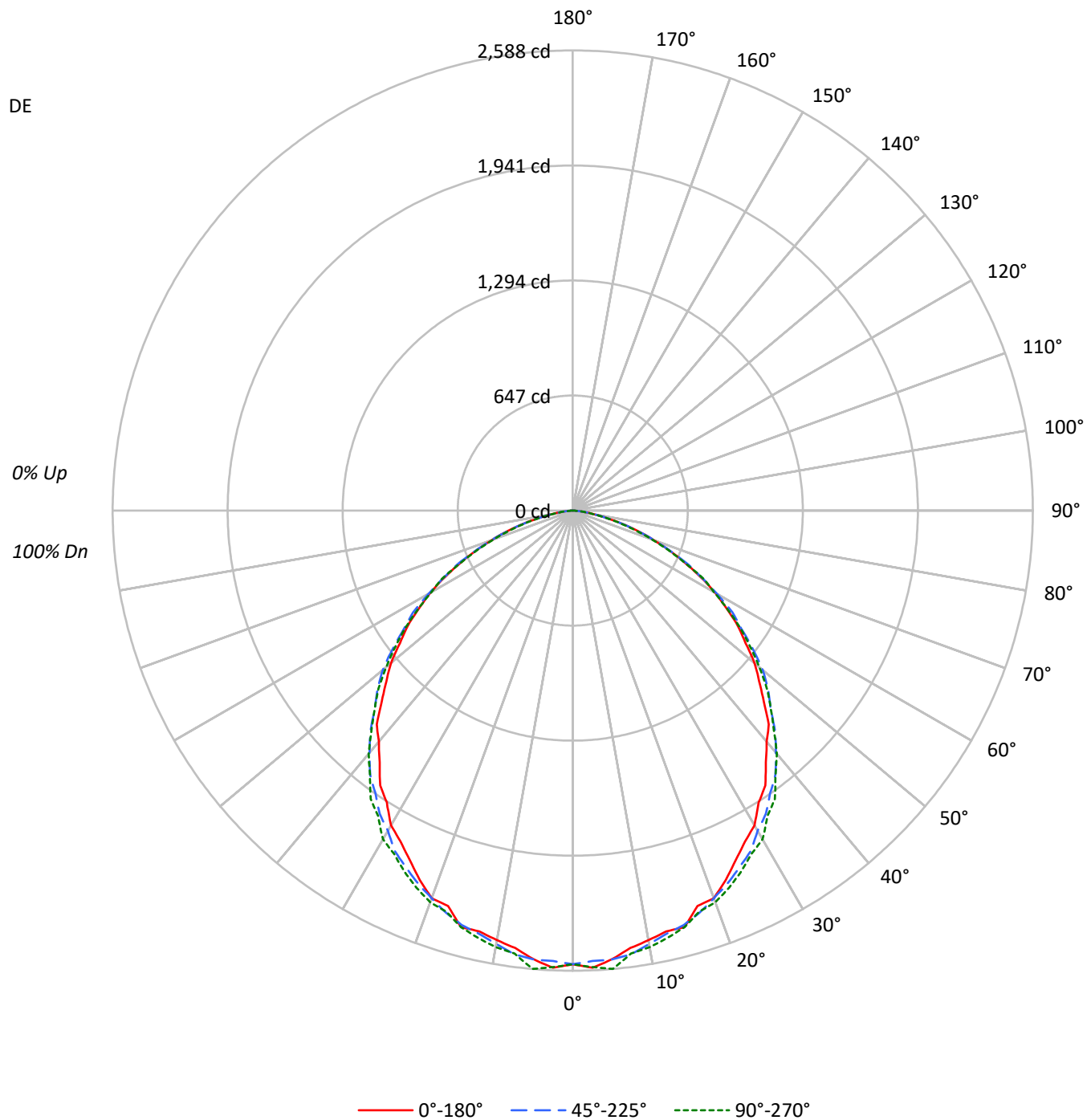
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	6865	6865	6865
5°	6843	6845	6990
10°	6704	6762	6810
15°	6757	6720	6758
20°	6643	6643	6714
25°	6439	6579	6652
30°	6350	6462	6634
35°	6201	6363	6506
40°	5959	6246	6274
45°	5779	5985	5993
50°	5589	5842	5730
55°	5325	5429	5391
60°	4980	5029	4939
65°	4441	4553	4409
70°	3810	3823	3717
75°	3017	3010	2894
80°	2021	1965	1889
85°	1099	1087	1016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 6139 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.0	3.7
10°-20°	680.1	10.6
20°-30°	1019.0	15.8
30°-40°	1207.7	18.8
40°-50°	1210.0	18.8
50°-60°	1027.0	16.0
60°-70°	692.4	10.8
70°-80°	304.3	4.7
80°-90°	49.4	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°	1939.1	30.2
0°-40°	3146.8	48.9
0°-60°	5383.8	83.7
0°-90°	6430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2551	2551	2551	2551	2551	
5°	2533	2527	2534	2527	2588	239
15°	2425	2397	2412	2425	2426	676
25°	2168	2180	2216	2245	2240	1003
35°	1888	1893	1937	1982	1980	1172
45°	1519	1547	1573	1613	1575	1175
55°	1135	1128	1157	1149	1149	1010
65°	697	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°	2551.3	2551.3	2551.3	2551.3	2551.3
2.5°	2573.3	2553.9	2535.8	2556.9	2569.7
5°	2533.1	2527.2	2534.1	2526.6	2587.5
7.5°	2481.1	2503.8	2517.0	2508.8	2512.4
10°	2453.4	2445.5	2474.8	2495.3	2492.3
12.5°	2423.8	2435.6	2437.3	2459.4	2461.3
15°	2425.4	2397.4	2412.3	2424.8	2425.8
17.5°	2331.2	2361.5	2371.7	2400.4	2364.8
20°	2319.7	2297.6	2319.7	2349.0	2344.4
22.5°	2248.9	2224.2	2271.6	2297.6	2296.0
25°	2168.5	2180.3	2215.9	2244.9	2240.3
27.5°	2098.0	2111.8	2162.6	2202.4	2176.7
30°	2043.6	2036.7	2079.5	2115.1	2134.9
32.5°	1946.5	1971.5	2021.6	2056.8	2038.0
35°	1887.5	1893.1	1936.9	1981.7	1980.4
37.5°	1784.4	1810.4	1872.0	1884.5	1873.0
40°	1696.4	1722.5	1778.1	1791.6	1786.0
42.5°	1631.6	1636.2	1683.9	1699.4	1674.7
45°	1518.6	1546.9	1572.6	1613.1	1574.9
47.5°	1422.4	1435.6	1490.9	1501.8	1481.7
50°	1335.1	1339.7	1395.4	1381.9	1368.7
52.5°	1225.4	1244.8	1276.1	1273.5	1258.0
55°	1135.1	1127.6	1157.2	1149.3	1149.0
57.5°	1026.8	1039.9	1064.3	1051.8	1031.7
60°	925.3	925.6	934.5	920.4	917.7
62.5°	812.3	816.3	818.2	800.8	829.1
65°	697.4	688.1	715.1	687.8	692.4
67.5°	591.6	596.2	593.6	576.5	583.1
70°	484.2	490.2	485.9	466.4	472.4
72.5°	386.1	378.8	383.4	359.1	370.3
75°	290.2	284.3	289.5	269.1	278.3
77.5°	197.6	202.3	199.0	188.1	194.4
80°	130.4	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	35.2	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)