

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: P563052

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563052
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2STD-50-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6927.0 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

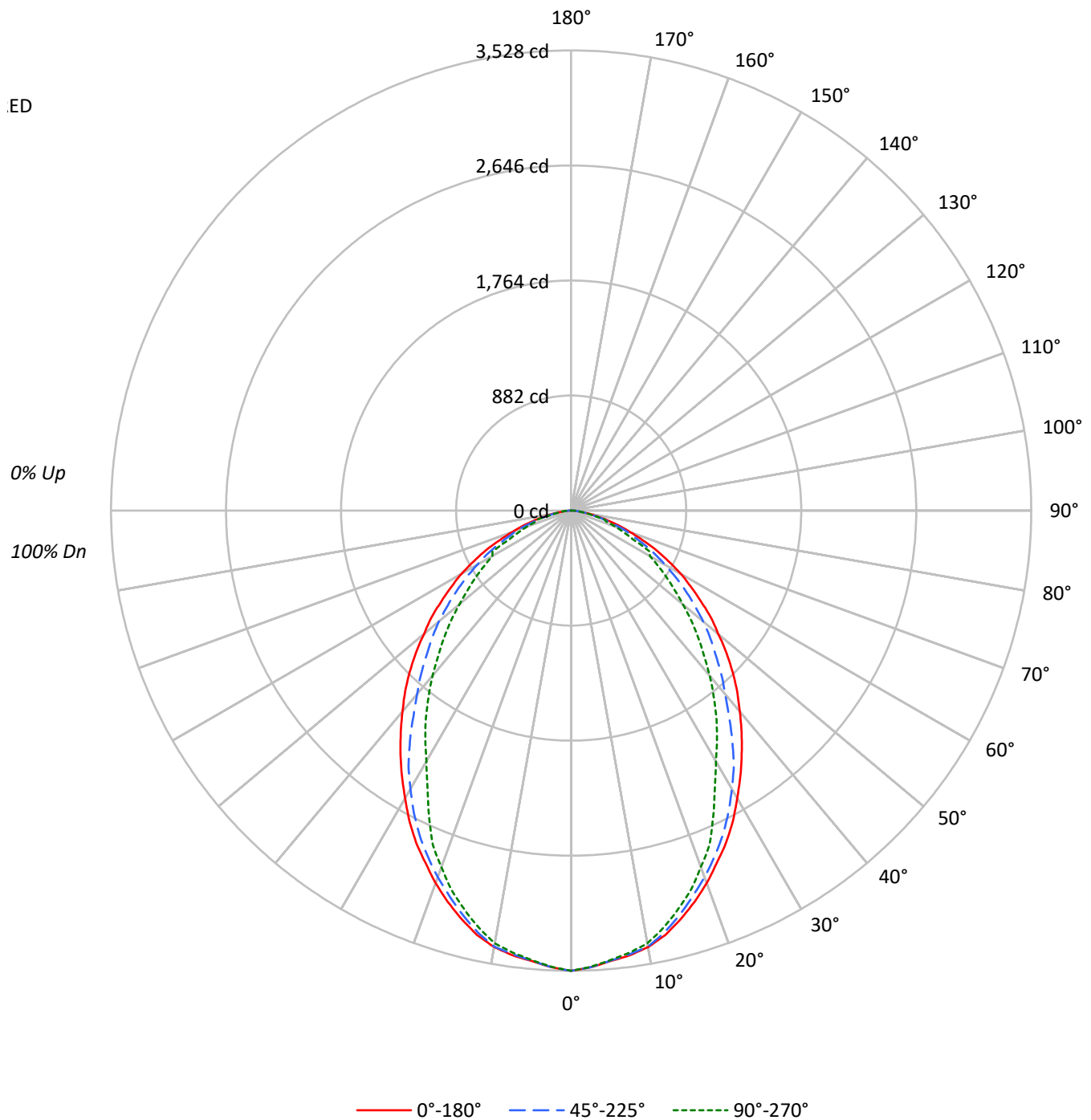
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4748	4748	4748
5°	4683	4678	4672
10°	4643	4637	4603
15°	4517	4472	4409
20°	4351	4281	4165
25°	4173	4082	3827
30°	3955	3828	3448
35°	3745	3538	3189
40°	3532	3224	2902
45°	3330	2981	2624
50°	3082	2767	2340
55°	2852	2507	2095
60°	2613	2239	1877
65°	2299	1961	1662
70°	1893	1717	1412
75°	1506	1315	1378
80°	1011	948	885
85°	630	756	881

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3330 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.5	4.7
10°-20°	901.4	13.0
20°-30°	1248.0	18.0
30°-40°	1330.7	19.2
40°-50°	1214.0	17.5
50°-60°	951.1	13.7
60°-70°	619.9	8.9
70°-80°	274.6	4.0
80°-90°	59.0	0.9
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°	2477.8	35.8
0°-40°	3808.5	55.0
0°-60°	5973.6	86.2
0°-90°	6927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3528	3528	3528	3528	3528	
5°	3467	3463	3463	3459	3459	329
15°	3243	3243	3210	3178	3166	912
25°	2811	2794	2749	2652	2578	1290
35°	2280	2264	2154	1991	1942	1426
45°	1750	1713	1566	1436	1379	1348
55°	1216	1179	1069	942	893	1090
65°	722	681	616	628	522	712
75°	290	269	253	241	265	310
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3528.5	3528.5	3528.5	3528.5	3528.5
2.5°	3504.0	3504.0	3504.0	3500.0	3500.0
5°	3467.3	3463.3	3463.3	3459.2	3459.2
7.5°	3438.8	3434.7	3430.6	3426.5	3418.4
10°	3398.0	3398.0	3393.9	3373.5	3369.4
12.5°	3332.7	3328.6	3312.3	3283.8	3275.6
15°	3243.0	3243.0	3210.3	3177.7	3165.5
17.5°	3145.1	3141.0	3100.2	3067.6	3051.3
20°	3039.0	3030.9	2990.1	2937.0	2908.5
22.5°	2920.7	2920.7	2871.8	2802.4	2773.9
25°	2810.6	2794.3	2749.4	2651.5	2578.1
27.5°	2684.1	2659.6	2610.7	2472.0	2386.3
30°	2545.4	2533.2	2463.8	2284.4	2219.1
32.5°	2414.9	2394.5	2321.1	2133.4	2080.4
35°	2280.3	2264.0	2153.8	1990.7	1941.7
37.5°	2145.7	2125.3	1986.6	1856.0	1794.9
40°	2011.1	1986.6	1835.6	1717.3	1652.1
42.5°	1884.6	1852.0	1705.1	1578.7	1505.2
45°	1750.0	1713.3	1566.4	1435.9	1378.8
47.5°	1615.4	1582.7	1448.1	1313.5	1248.2
50°	1472.6	1444.0	1321.7	1187.1	1117.7
52.5°	1354.3	1309.4	1191.1	1056.5	999.4
55°	1215.6	1178.9	1068.8	942.3	893.3
57.5°	1089.2	1052.4	950.5	832.2	791.4
60°	970.9	917.8	832.2	730.2	697.5
62.5°	840.3	799.5	726.1	640.4	681.2
65°	722.0	681.2	616.0	628.2	522.1
67.5°	591.5	571.1	514.0	456.9	440.6
70°	481.3	456.9	436.5	375.3	359.0
72.5°	383.4	359.0	330.4	297.8	285.5
75°	289.6	269.2	252.9	240.7	265.1
77.5°	199.9	191.7	179.5	167.2	163.2
80°	130.5	126.5	122.4	118.3	114.2
82.5°	77.5	77.5	77.5	77.5	77.5
85°	40.8	44.9	49.0	53.0	57.1
87.5°	24.5	24.5	28.6	32.6	36.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)