

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: P590972

Luminaire Tested: FSR-24-2-LD4-4STD-50-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590972
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7661.0 lumens
Efficiency: N/A
Efficacy: 115.0 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

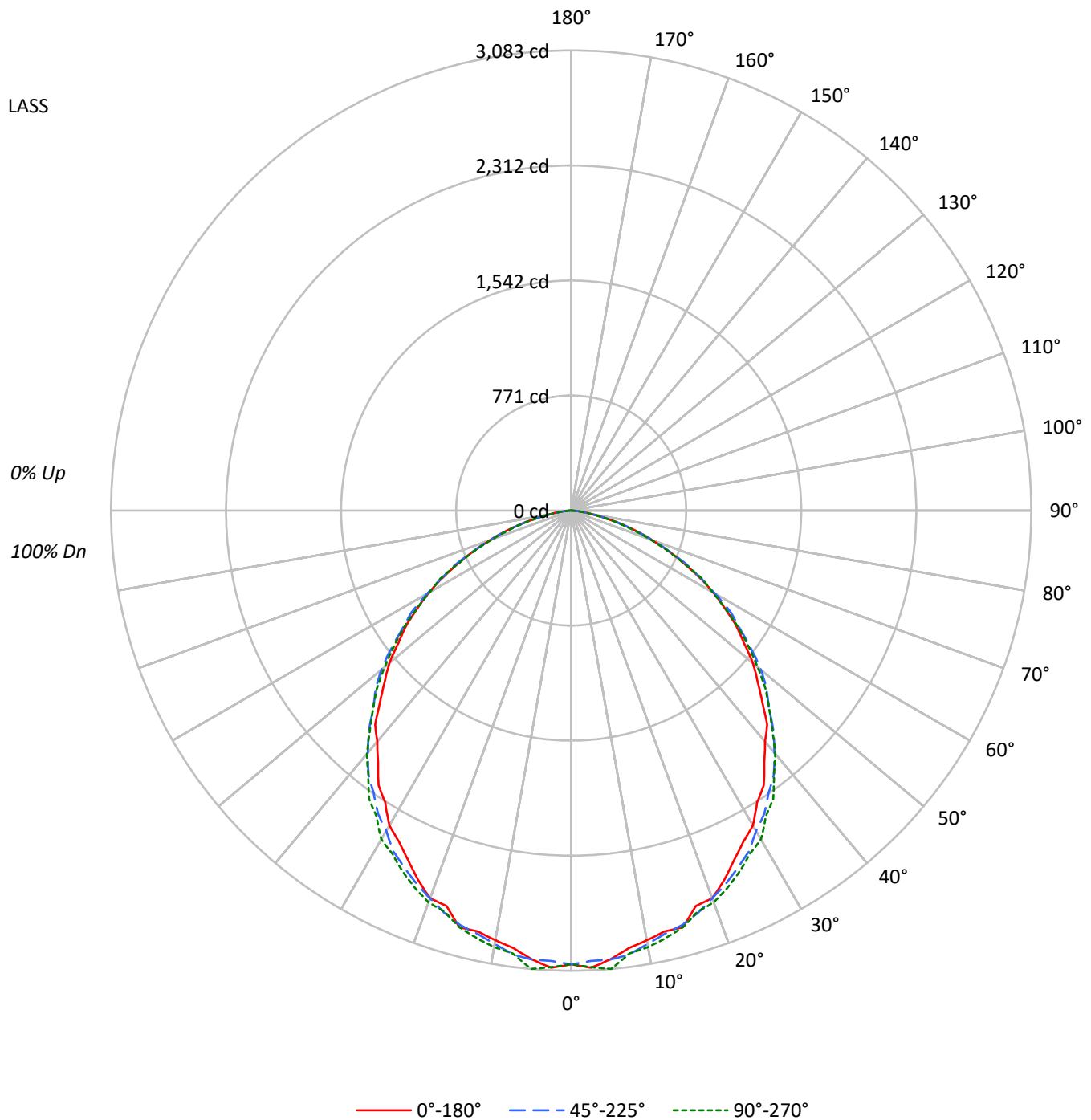
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8180	8180	8180
5°	8153	8156	8328
10°	7987	8057	8114
15°	8051	8007	8052
20°	7915	7915	7999
25°	7671	7839	7925
30°	7566	7699	7904
35°	7388	7581	7751
40°	7100	7442	7475
45°	6886	7131	7141
50°	6659	6960	6827
55°	6345	6469	6422
60°	5934	5992	5885
65°	5291	5426	5253
70°	4539	4555	4428
75°	3595	3587	3448
80°	2408	2342	2250
85°	1309	1297	1210

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7314 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.9	3.7
10°-20°	810.4	10.6
20°-30°	1214.1	15.8
30°-40°	1438.9	18.8
40°-50°	1441.6	18.8
50°-60°	1223.7	16.0
60°-70°	825.0	10.8
70°-80°	362.5	4.7
80°-90°	58.9	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°	2310.4	30.2
0°-40°	3749.3	48.9
0°-60°	6414.6	83.7
0°-90°	7661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3040	3040	3040	3040	3040	
5°	3018	3011	3019	3010	3083	285
15°	2890	2856	2874	2889	2890	805
25°	2584	2598	2640	2675	2669	1194
35°	2249	2256	2308	2361	2360	1396
45°	1809	1843	1874	1922	1876	1400
55°	1352	1343	1379	1369	1369	1203
65°	831	820	852	820	825	826
75°	346	339	345	321	332	371
85°	42	41	42	41	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3039.7	3039.7	3039.7	3039.7	3039.7
2.5°	3066.0	3042.8	3021.2	3046.4	3061.7
5°	3018.1	3011.0	3019.3	3010.3	3082.9
7.5°	2956.1	2983.2	2998.9	2989.1	2993.4
10°	2923.1	2913.7	2948.6	2973.0	2969.4
12.5°	2887.8	2901.9	2903.9	2930.2	2932.5
15°	2889.8	2856.4	2874.1	2889.0	2890.2
17.5°	2777.5	2813.6	2825.8	2859.9	2817.6
20°	2763.8	2737.5	2763.8	2798.7	2793.2
22.5°	2679.4	2650.0	2706.5	2737.5	2735.5
25°	2583.6	2597.8	2640.2	2674.7	2669.2
27.5°	2499.7	2516.1	2576.6	2624.1	2593.5
30°	2434.9	2426.7	2477.7	2520.1	2543.6
32.5°	2319.1	2348.9	2408.6	2450.6	2428.2
35°	2248.9	2255.5	2307.7	2361.1	2359.5
37.5°	2126.0	2157.0	2230.4	2245.3	2231.6
40°	2021.2	2052.2	2118.6	2134.7	2128.0
42.5°	1943.9	1949.4	2006.3	2024.8	1995.3
45°	1809.3	1843.0	1873.7	1921.9	1876.4
47.5°	1694.7	1710.4	1776.3	1789.3	1765.3
50°	1590.7	1596.2	1662.5	1646.4	1630.7
52.5°	1460.0	1483.1	1520.4	1517.3	1498.8
55°	1352.5	1343.4	1378.8	1369.3	1368.9
57.5°	1223.3	1239.0	1268.1	1253.2	1229.2
60°	1102.5	1102.8	1113.4	1096.6	1093.4
62.5°	967.8	972.5	974.9	954.1	987.9
65°	830.9	819.9	852.1	819.5	825.0
67.5°	704.9	710.4	707.2	686.8	694.7
70°	576.9	584.0	578.9	555.7	562.8
72.5°	460.0	451.3	456.8	427.8	441.1
75°	345.8	338.7	345.0	320.6	331.6
77.5°	235.5	241.0	237.1	224.1	231.6
80°	155.4	151.1	151.1	143.6	145.2
82.5°	90.7	86.3	85.2	82.8	86.3
85°	42.4	41.2	42.0	40.8	39.2
87.5°	15.3	15.7	15.7	14.9	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)