

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: P561735

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561735
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-12-4-LD4-2STD-35-UNV-81-87-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5917.0 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

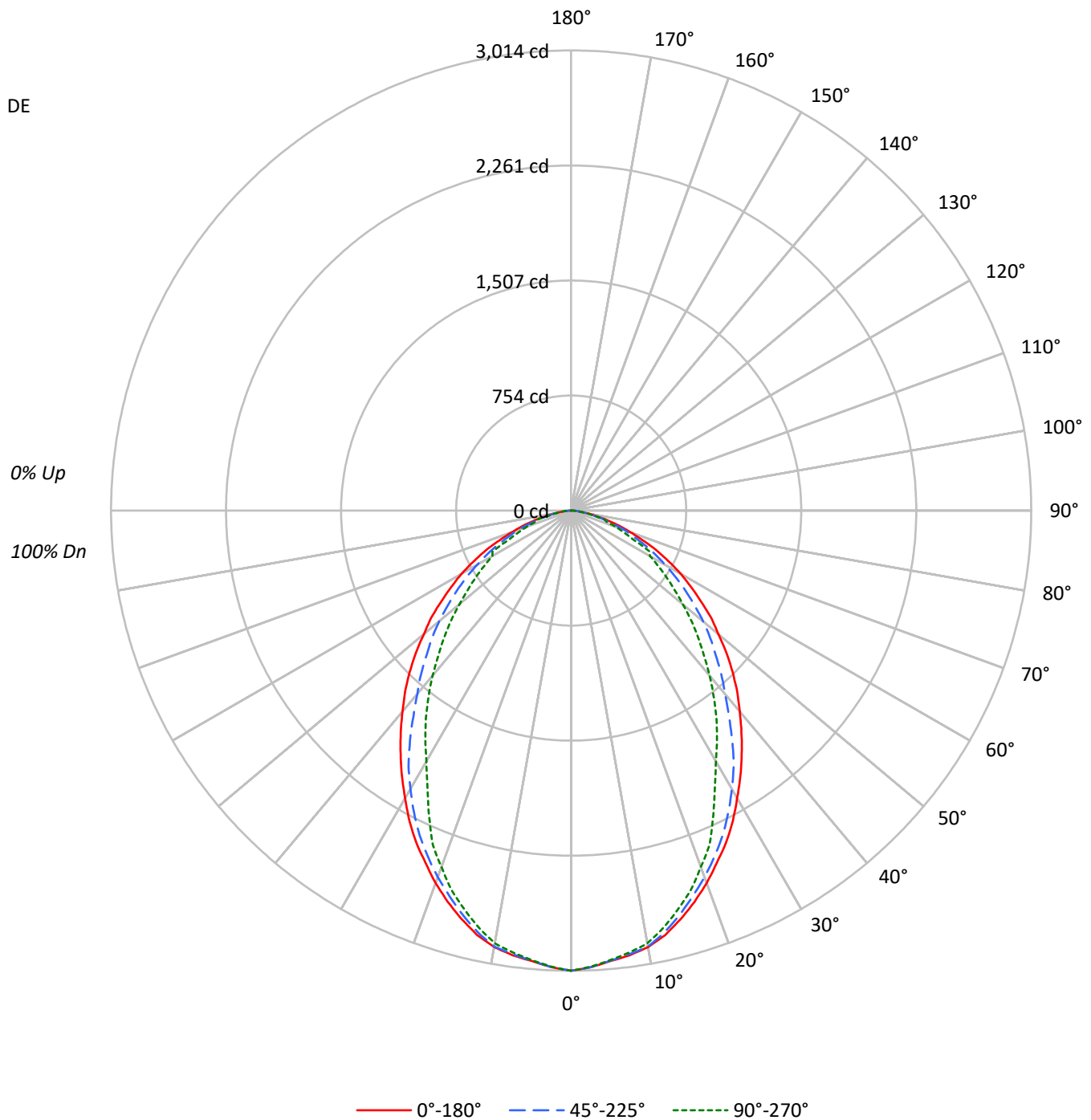
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8111	8111	8111
5°	8001	7991	7982
10°	7931	7922	7864
15°	7717	7640	7533
20°	7434	7314	7115
25°	7128	6973	6539
30°	6756	6540	5890
35°	6399	6044	5449
40°	6034	5508	4957
45°	5689	5092	4482
50°	5266	4726	3997
55°	4872	4283	3580
60°	4463	3825	3207
65°	3927	3351	2840
70°	3235	2933	2412
75°	2572	2246	2355
80°	1728	1619	1512
85°	1074	1291	1507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5689 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.6	4.7
10°-20°	770.0	13.0
20°-30°	1066.0	18.0
30°-40°	1136.7	19.2
40°-50°	1037.0	17.5
50°-60°	812.4	13.7
60°-70°	529.5	8.9
70°-80°	234.6	4.0
80°-90°	50.4	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°	2116.6	35.8
0°-40°	3253.2	55.0
0°-60°	5102.6	86.2
0°-90°	5917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3014	3014	3014	3014	3014	
5°	2962	2958	2958	2955	2955	281
15°	2770	2770	2742	2714	2704	779
25°	2401	2387	2348	2265	2202	1102
35°	1948	1934	1840	1700	1659	1218
45°	1495	1464	1338	1226	1178	1151
55°	1038	1007	913	805	763	931
65°	617	582	526	537	446	608
75°	247	230	216	206	226	265
85°	35	38	42	45	49	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3014.0	3014.0	3014.0	3014.0	3014.0
2.5°	2993.1	2993.1	2993.1	2989.6	2989.6
5°	2961.8	2958.3	2958.3	2954.8	2954.8
7.5°	2937.4	2933.9	2930.4	2926.9	2920.0
10°	2902.5	2902.5	2899.1	2881.6	2878.1
12.5°	2846.8	2843.3	2829.4	2805.0	2798.0
15°	2770.1	2770.1	2742.3	2714.4	2703.9
17.5°	2686.5	2683.0	2648.2	2620.3	2606.4
20°	2595.9	2588.9	2554.1	2508.8	2484.4
22.5°	2494.9	2494.9	2453.0	2393.8	2369.4
25°	2400.8	2386.8	2348.5	2264.9	2202.2
27.5°	2292.8	2271.9	2230.0	2111.6	2038.4
30°	2174.3	2163.8	2104.6	1951.3	1895.5
32.5°	2062.8	2045.4	1982.6	1822.4	1777.1
35°	1947.8	1933.9	1839.8	1700.4	1658.6
37.5°	1832.8	1815.4	1696.9	1585.4	1533.2
40°	1717.8	1696.9	1568.0	1466.9	1411.2
42.5°	1609.8	1581.9	1456.5	1348.5	1285.8
45°	1494.8	1463.5	1338.0	1226.5	1177.7
47.5°	1379.8	1352.0	1237.0	1122.0	1066.2
50°	1257.9	1233.5	1129.0	1014.0	954.7
52.5°	1156.8	1118.5	1017.5	902.5	853.7
55°	1038.4	1007.0	912.9	804.9	763.1
57.5°	930.3	899.0	811.9	710.8	676.0
60°	829.3	784.0	710.8	623.7	595.8
62.5°	717.8	683.0	620.2	547.1	581.9
65°	616.7	581.9	526.2	536.6	446.0
67.5°	505.2	487.8	439.0	390.3	376.3
70°	411.2	390.3	372.8	320.6	306.6
72.5°	327.5	306.6	282.2	254.4	243.9
75°	247.4	230.0	216.0	205.6	226.5
77.5°	170.7	163.8	153.3	142.9	139.4
80°	111.5	108.0	104.5	101.0	97.6
82.5°	66.2	66.2	66.2	66.2	66.2
85°	34.8	38.3	41.8	45.3	48.8
87.5°	20.9	20.9	24.4	27.9	31.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)