

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: P562949

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562949
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-40-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7257.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

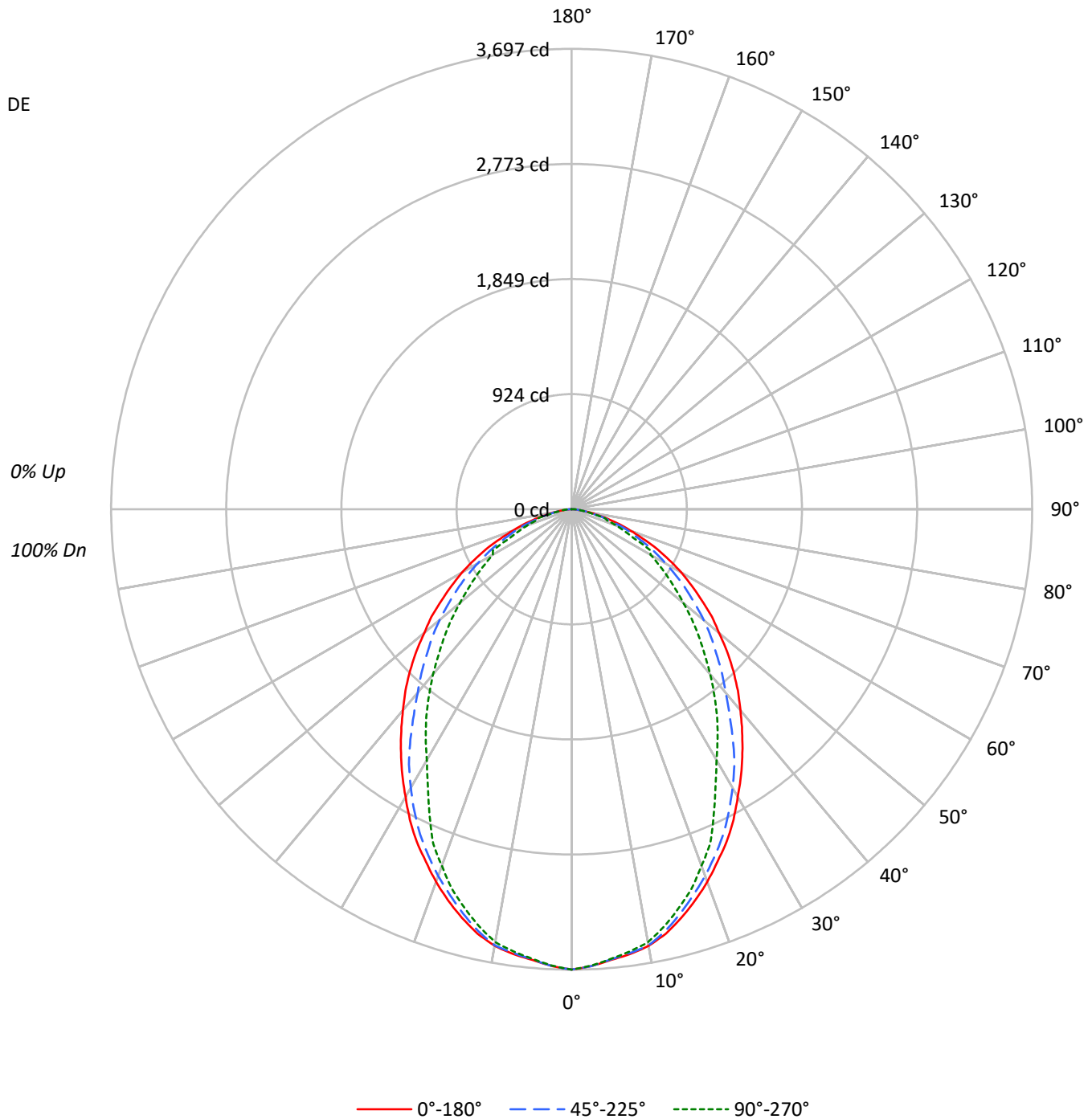
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4974	4974	4974
5°	4906	4900	4895
10°	4864	4858	4823
15°	4733	4685	4619
20°	4559	4485	4363
25°	4371	4276	4010
30°	4143	4010	3612
35°	3924	3706	3341
40°	3701	3378	3040
45°	3489	3123	2749
50°	3229	2898	2451
55°	2987	2627	2195
60°	2737	2346	1967
65°	2408	2054	1741
70°	1984	1799	1480
75°	1577	1378	1444
80°	1060	993	927
85°	659	792	923

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3489 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.1	4.7
10°-20°	944.4	13.0
20°-30°	1307.4	18.0
30°-40°	1394.1	19.2
40°-50°	1271.8	17.5
50°-60°	996.4	13.7
60°-70°	649.4	8.9
70°-80°	287.7	4.0
80°-90°	61.8	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°	2595.9	35.8
0°-40°	3990.0	55.0
0°-60°	6258.2	86.2
0°-90°	7257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3697	3697	3697	3697	3697	
5°	3632	3628	3628	3624	3624	345
15°	3398	3398	3363	3329	3316	955
25°	2944	2927	2880	2778	2701	1352
35°	2389	2372	2256	2086	2034	1494
45°	1833	1795	1641	1504	1444	1412
55°	1274	1235	1120	987	936	1142
65°	756	714	645	658	547	745
75°	303	282	265	252	278	325
85°	43	47	51	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3696.6	3696.6	3696.6	3696.6	3696.6
2.5°	3671.0	3671.0	3671.0	3666.7	3666.7
5°	3632.5	3628.2	3628.2	3624.0	3624.0
7.5°	3602.6	3598.3	3594.1	3589.8	3581.2
10°	3559.9	3559.9	3555.6	3534.2	3530.0
12.5°	3491.5	3487.2	3470.1	3440.2	3431.7
15°	3397.5	3397.5	3363.3	3329.1	3316.3
17.5°	3294.9	3290.6	3247.9	3213.7	3196.6
20°	3183.8	3175.2	3132.5	3077.0	3047.0
22.5°	3059.9	3059.9	3008.6	2935.9	2906.0
25°	2944.5	2927.4	2880.4	2777.8	2700.9
27.5°	2812.0	2786.4	2735.1	2589.8	2500.0
30°	2666.7	2653.9	2581.2	2393.2	2324.8
32.5°	2529.9	2508.6	2431.6	2235.1	2179.5
35°	2388.9	2371.8	2256.4	2085.5	2034.2
37.5°	2247.9	2226.5	2081.2	1944.5	1880.4
40°	2106.9	2081.2	1923.1	1799.2	1730.8
42.5°	1974.4	1940.2	1786.3	1653.9	1576.9
45°	1833.4	1794.9	1641.0	1504.3	1444.5
47.5°	1692.3	1658.1	1517.1	1376.1	1307.7
50°	1542.8	1512.8	1384.6	1243.6	1171.0
52.5°	1418.8	1371.8	1247.9	1106.8	1047.0
55°	1273.5	1235.1	1119.7	987.2	935.9
57.5°	1141.0	1102.6	995.7	871.8	829.1
60°	1017.1	961.5	871.8	765.0	730.8
62.5°	880.4	837.6	760.7	670.9	713.7
65°	756.4	713.7	645.3	658.1	547.0
67.5°	619.7	598.3	538.5	478.6	461.5
70°	504.3	478.6	457.3	393.2	376.1
72.5°	401.7	376.1	346.2	312.0	299.1
75°	303.4	282.1	265.0	252.1	277.8
77.5°	209.4	200.9	188.0	175.2	170.9
80°	136.8	132.5	128.2	123.9	119.7
82.5°	81.2	81.2	81.2	81.2	81.2
85°	42.7	47.0	51.3	55.6	59.8
87.5°	25.6	25.6	29.9	34.2	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)