

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: P563026

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563026
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-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6357.0 lumens
Efficiency: N/A
Efficacy: 95.5 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

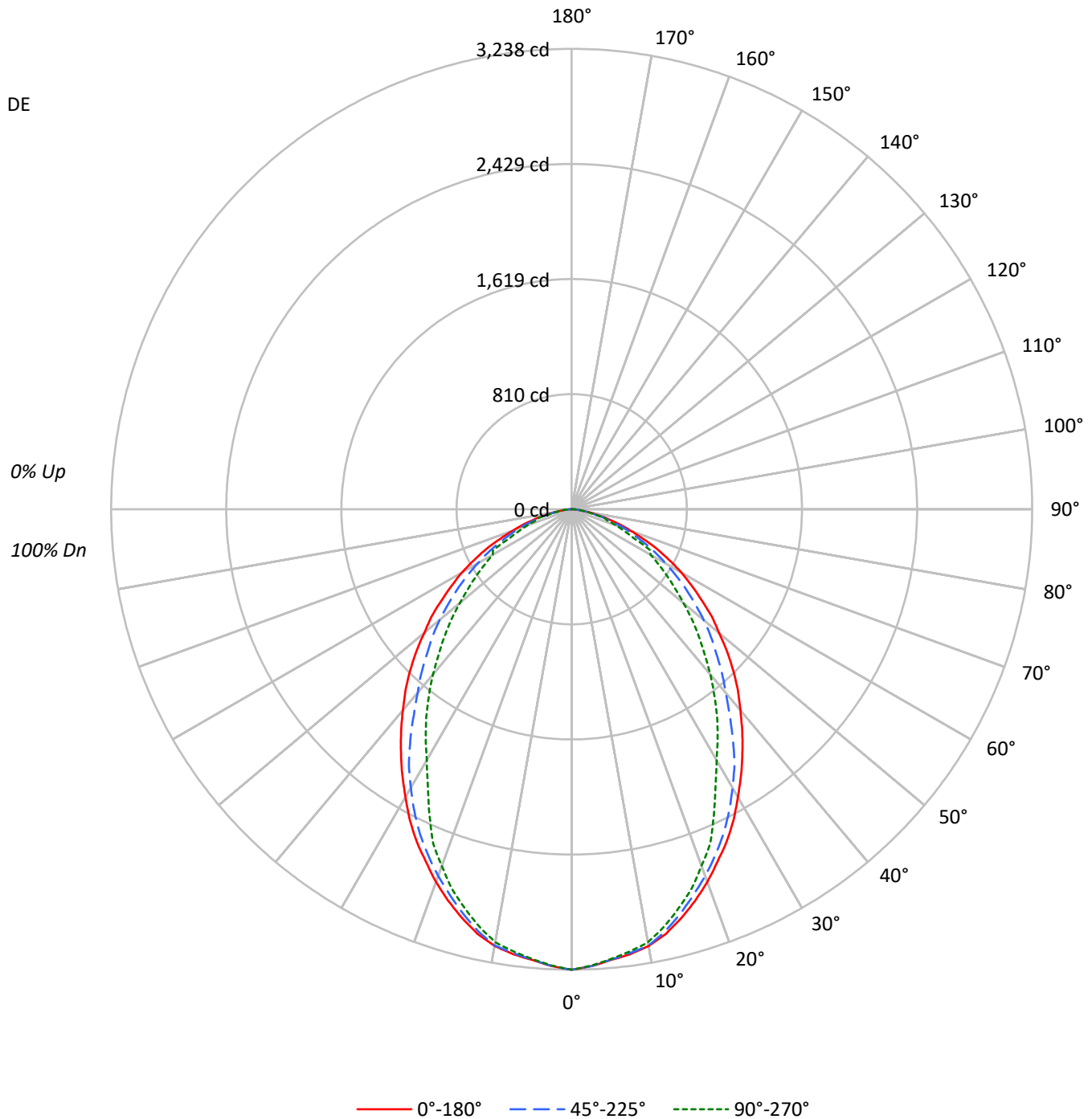
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4357	4357	4357
5°	4298	4293	4288
10°	4261	4255	4225
15°	4146	4104	4047
20°	3993	3929	3822
25°	3829	3746	3512
30°	3629	3513	3164
35°	3437	3247	2927
40°	3242	2959	2663
45°	3056	2735	2408
50°	2829	2539	2147
55°	2617	2301	1923
60°	2398	2055	1722
65°	2110	1800	1526
70°	1738	1576	1296
75°	1382	1207	1265
80°	928	870	812
85°	577	693	809

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3056 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.4	4.7
10°-20°	827.2	13.0
20°-30°	1145.3	18.0
30°-40°	1221.2	19.2
40°-50°	1114.1	17.5
50°-60°	872.8	13.7
60°-70°	568.9	8.9
70°-80°	252.0	4.0
80°-90°	54.1	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°	2274.0	35.8
0°-40°	3495.2	55.0
0°-60°	5482.0	86.2
0°-90°	6357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3238	3238	3238	3238	3238	
5°	3182	3178	3178	3174	3174	302
15°	2976	2976	2946	2916	2905	837
25°	2579	2564	2523	2433	2366	1184
35°	2093	2078	1977	1827	1782	1308
45°	1606	1572	1438	1318	1265	1237
55°	1116	1082	981	865	820	1001
65°	663	625	565	576	479	653
75°	266	247	232	221	243	285
85°	37	41	45	49	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3238.2	3238.2	3238.2	3238.2	3238.2
2.5°	3215.7	3215.7	3215.7	3212.0	3212.0
5°	3182.0	3178.3	3178.3	3174.5	3174.5
7.5°	3155.8	3152.1	3148.3	3144.6	3137.1
10°	3118.4	3118.4	3114.6	3095.9	3092.2
12.5°	3058.5	3054.7	3039.8	3013.6	3006.1
15°	2976.1	2976.1	2946.2	2916.2	2905.0
17.5°	2886.3	2882.5	2845.1	2815.1	2800.2
20°	2788.9	2781.5	2744.0	2695.4	2669.2
22.5°	2680.4	2680.4	2635.5	2571.8	2545.6
25°	2579.3	2564.3	2523.2	2433.3	2365.9
27.5°	2463.3	2440.8	2395.9	2268.6	2190.0
30°	2336.0	2324.7	2261.1	2096.4	2036.5
32.5°	2216.2	2197.5	2130.1	1957.9	1909.2
35°	2092.6	2077.7	1976.6	1826.9	1781.9
37.5°	1969.1	1950.4	1823.1	1703.3	1647.2
40°	1845.6	1823.1	1684.6	1576.0	1516.1
42.5°	1729.5	1699.6	1564.8	1448.8	1381.4
45°	1606.0	1572.3	1437.5	1317.7	1265.3
47.5°	1482.4	1452.5	1329.0	1205.4	1145.5
50°	1351.4	1325.2	1212.9	1089.4	1025.7
52.5°	1242.9	1201.7	1093.1	969.6	917.2
55°	1115.6	1081.9	980.8	864.8	819.8
57.5°	999.5	965.8	872.2	763.7	726.2
60°	891.0	842.3	763.7	670.1	640.1
62.5°	771.2	733.7	666.4	587.7	625.2
65°	662.6	625.2	565.3	576.5	479.2
67.5°	542.8	524.1	471.7	419.3	404.3
70°	441.7	419.3	400.6	344.4	329.4
72.5°	351.9	329.4	303.2	273.3	262.0
75°	265.8	247.1	232.1	220.9	243.3
77.5°	183.4	175.9	164.7	153.5	149.7
80°	119.8	116.1	112.3	108.6	104.8
82.5°	71.1	71.1	71.1	71.1	71.1
85°	37.4	41.2	44.9	48.7	52.4
87.5°	22.5	22.5	26.2	29.9	33.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)