

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: P563288

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563288
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-LD4-3LO-35-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5744.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

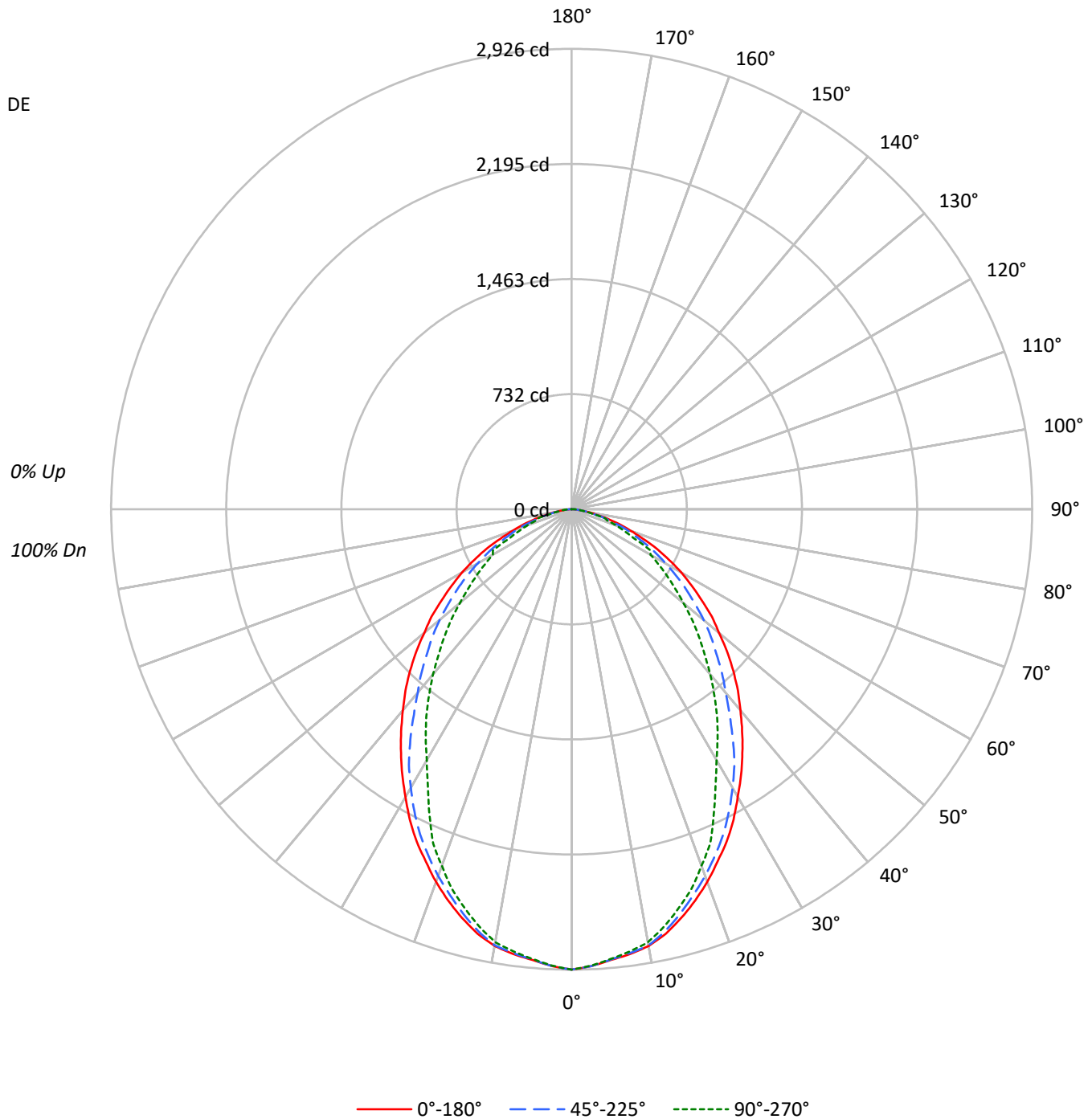
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3937	3937	3937
5°	3883	3879	3874
10°	3850	3845	3817
15°	3746	3708	3656
20°	3608	3550	3453
25°	3460	3385	3174
30°	3279	3174	2859
35°	3106	2934	2645
40°	2929	2674	2406
45°	2761	2472	2175
50°	2556	2294	1940
55°	2365	2079	1738
60°	2166	1857	1556
65°	1906	1626	1379
70°	1570	1424	1171
75°	1249	1090	1143
80°	838	786	734
85°	522	627	732

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.4	4.7
10°-20°	747.5	13.0
20°-30°	1034.8	18.0
30°-40°	1103.4	19.2
40°-50°	1006.7	17.5
50°-60°	788.6	13.7
60°-70°	514.0	8.9
70°-80°	227.7	4.0
80°-90°	48.9	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°	2054.7	35.8
0°-40°	3158.1	55.0
0°-60°	4953.4	86.2
0°-90°	5744.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5744.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2926	2926	2926	2926	2926	
5°	2875	2872	2872	2868	2868	273
15°	2689	2689	2662	2635	2625	756
25°	2331	2317	2280	2199	2138	1070
35°	1891	1877	1786	1651	1610	1182
45°	1451	1421	1299	1191	1143	1118
55°	1008	978	886	781	741	904
65°	599	565	511	521	433	590
75°	240	223	210	200	220	257
85°	34	37	41	44	47	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2925.9	2925.9	2925.9	2925.9	2925.9
2.5°	2905.6	2905.6	2905.6	2902.2	2902.2
5°	2875.2	2871.8	2871.8	2868.4	2868.4
7.5°	2851.5	2848.1	2844.7	2841.4	2834.6
10°	2817.7	2817.7	2814.3	2797.4	2794.0
12.5°	2763.6	2760.2	2746.6	2723.0	2716.2
15°	2689.1	2689.1	2662.1	2635.0	2624.9
17.5°	2608.0	2604.6	2570.7	2543.7	2530.2
20°	2520.0	2513.2	2479.4	2435.4	2411.8
22.5°	2421.9	2421.9	2381.3	2323.8	2300.1
25°	2330.6	2317.1	2279.8	2198.7	2137.8
27.5°	2225.7	2205.4	2164.8	2049.8	1978.8
30°	2110.7	2100.6	2043.1	1894.2	1840.1
32.5°	2002.5	1985.6	1924.7	1769.1	1725.1
35°	1890.9	1877.3	1786.0	1650.7	1610.1
37.5°	1779.2	1762.3	1647.3	1539.1	1488.3
40°	1667.6	1647.3	1522.2	1424.1	1369.9
42.5°	1562.7	1535.7	1413.9	1309.1	1248.2
45°	1451.1	1420.7	1298.9	1190.7	1143.3
47.5°	1339.5	1312.4	1200.8	1089.2	1035.1
50°	1221.1	1197.4	1096.0	984.3	926.8
52.5°	1123.0	1085.8	987.7	876.1	828.7
55°	1008.0	977.6	886.2	781.4	740.8
57.5°	903.1	872.7	788.1	690.0	656.2
60°	805.0	761.1	690.0	605.5	578.4
62.5°	696.8	663.0	602.1	531.1	564.9
65°	598.7	564.9	510.8	520.9	433.0
67.5°	490.5	473.6	426.2	378.8	365.3
70°	399.1	378.8	361.9	311.2	297.7
72.5°	318.0	297.7	274.0	246.9	236.8
75°	240.2	223.2	209.7	199.6	219.9
77.5°	165.7	159.0	148.8	138.7	135.3
80°	108.2	104.9	101.5	98.1	94.7
82.5°	64.3	64.3	64.3	64.3	64.3
85°	33.8	37.2	40.6	44.0	47.4
87.5°	20.3	20.3	23.7	27.1	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)