

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: P562114

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562114
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-LD4-1HI-50-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 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: 3983.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

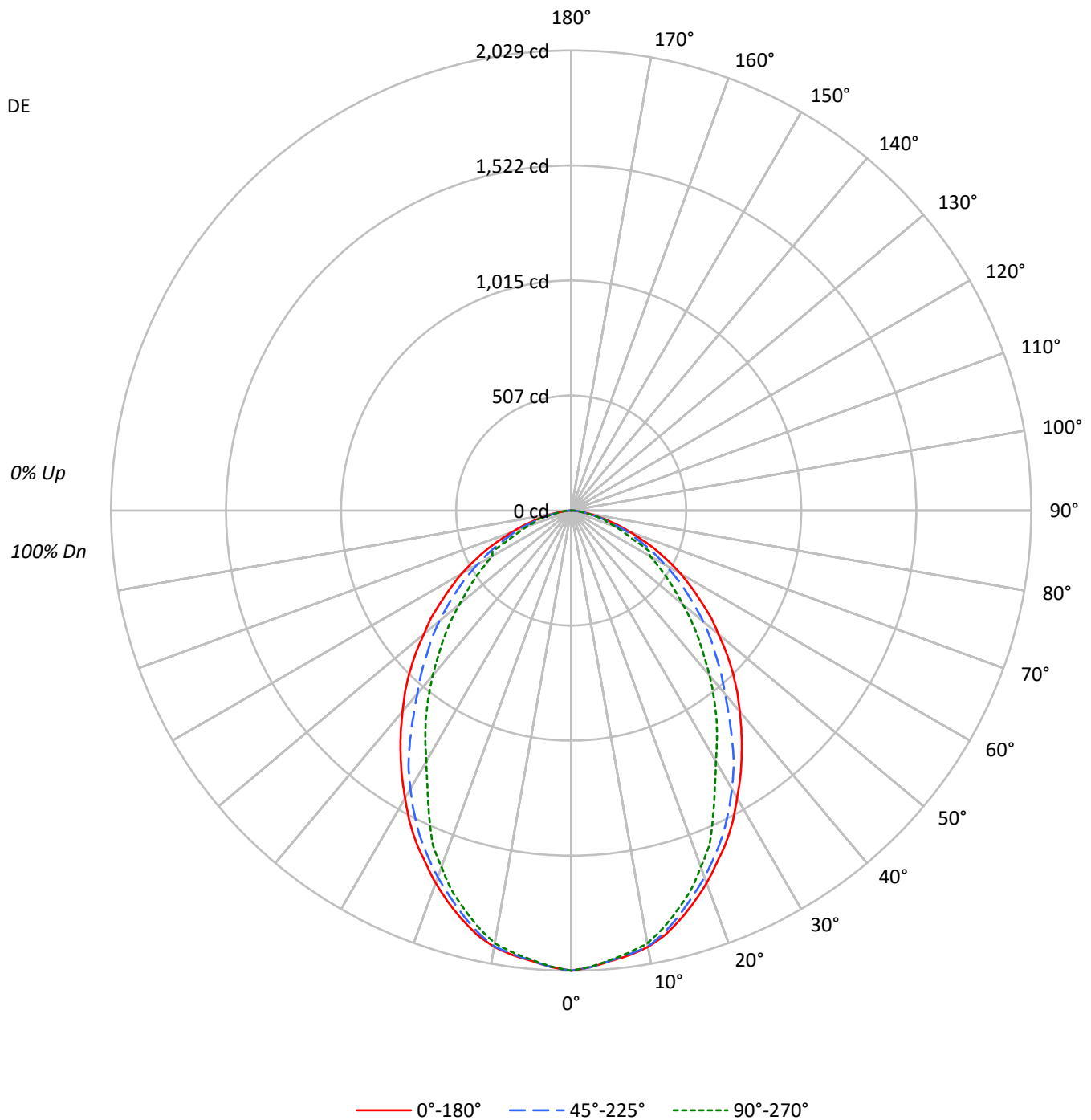
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2730	2730	2730
5°	2693	2690	2686
10°	2669	2666	2647
15°	2597	2571	2535
20°	2502	2462	2395
25°	2399	2347	2201
30°	2274	2201	1982
35°	2154	2034	1834
40°	2031	1854	1668
45°	1915	1714	1509
50°	1772	1591	1345
55°	1640	1441	1205
60°	1502	1288	1079
65°	1322	1128	956
70°	1089	987	812
75°	866	756	793
80°	582	545	509
85°	363	434	506

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1915 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.9	4.7
10°-20°	518.3	13.0
20°-30°	717.6	18.0
30°-40°	765.1	19.2
40°-50°	698.0	17.5
50°-60°	546.9	13.7
60°-70°	356.4	8.9
70°-80°	157.9	4.0
80°-90°	33.9	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°	1424.8	35.8
0°-40°	2189.9	55.0
0°-60°	3434.8	86.2
0°-90°	3983.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3983.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2029	2029	2029	2029	2029	
5°	1994	1991	1991	1989	1989	189
15°	1865	1865	1846	1827	1820	524
25°	1616	1607	1581	1525	1482	742
35°	1311	1302	1238	1145	1116	820
45°	1006	985	901	826	793	775
55°	699	678	614	542	514	627
65°	415	392	354	361	300	409
75°	166	155	145	138	152	178
85°	24	26	28	30	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2028.9	2028.9	2028.9	2028.9	2028.9
2.5°	2014.8	2014.8	2014.8	2012.5	2012.5
5°	1993.7	1991.4	1991.4	1989.0	1989.0
7.5°	1977.3	1974.9	1972.6	1970.2	1965.6
10°	1953.8	1953.8	1951.5	1939.8	1937.4
12.5°	1916.3	1914.0	1904.6	1888.2	1883.5
15°	1864.7	1864.7	1845.9	1827.2	1820.1
17.5°	1808.4	1806.1	1782.6	1763.8	1754.5
20°	1747.4	1742.7	1719.3	1688.8	1672.4
22.5°	1679.4	1679.4	1651.3	1611.4	1595.0
25°	1616.1	1606.7	1580.9	1524.6	1482.4
27.5°	1543.4	1529.3	1501.1	1421.4	1372.1
30°	1463.6	1456.6	1416.7	1313.5	1276.0
32.5°	1388.6	1376.8	1334.6	1226.7	1196.2
35°	1311.2	1301.8	1238.4	1144.6	1116.5
37.5°	1233.8	1222.0	1142.3	1067.2	1032.0
40°	1156.3	1142.3	1055.5	987.5	949.9
42.5°	1083.6	1064.9	980.4	907.7	865.5
45°	1006.2	985.1	900.7	825.6	792.8
47.5°	928.8	910.1	832.7	755.3	717.7
50°	846.7	830.3	760.0	682.6	642.7
52.5°	778.7	752.9	684.9	607.5	574.7
55°	699.0	677.9	614.5	541.8	513.7
57.5°	626.3	605.1	546.5	478.5	455.0
60°	558.2	527.7	478.5	419.9	401.1
62.5°	483.2	459.7	417.5	368.2	391.7
65°	415.2	391.7	354.2	361.2	300.2
67.5°	340.1	328.4	295.5	262.7	253.3
70°	276.8	262.7	251.0	215.8	206.4
72.5°	220.5	206.4	190.0	171.2	164.2
75°	166.5	154.8	145.4	138.4	152.5
77.5°	114.9	110.2	103.2	96.2	93.8
80°	75.1	72.7	70.4	68.0	65.7
82.5°	44.6	44.6	44.6	44.6	44.6
85°	23.5	25.8	28.1	30.5	32.8
87.5°	14.1	14.1	16.4	18.8	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)