

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: P562082

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562082
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-40-UNV-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3989.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

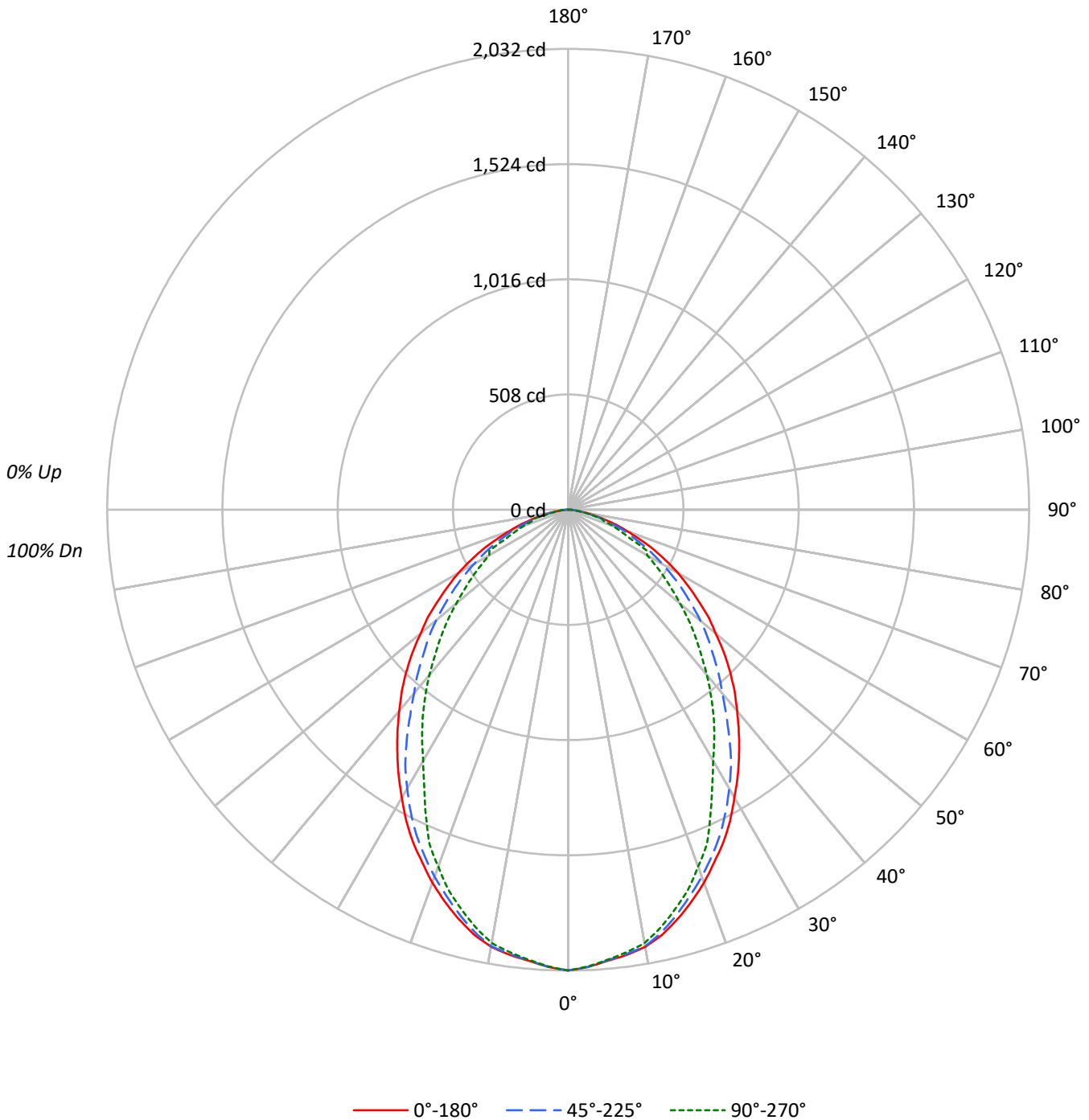
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2734	2734	2734
5°	2697	2694	2690
10°	2673	2670	2651
15°	2601	2575	2539
20°	2506	2465	2398
25°	2403	2351	2204
30°	2277	2204	1985
35°	2157	2037	1837
40°	2034	1857	1671
45°	1917	1716	1511
50°	1775	1593	1347
55°	1642	1444	1207
60°	1505	1290	1081
65°	1324	1129	957
70°	1090	989	813
75°	867	757	794
80°	583	546	510
85°	363	435	508

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1917 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.1	4.7
10°-20°	519.1	13.0
20°-30°	718.7	18.0
30°-40°	766.3	19.2
40°-50°	699.1	17.5
50°-60°	547.7	13.7
60°-70°	357.0	8.9
70°-80°	158.1	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°	1426.9	35.8
0°-40°	2193.2	55.0
0°-60°	3439.9	86.2
0°-90°	3989.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3989.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2032	2032	2032	2032	2032	
5°	1997	1994	1994	1992	1992	190
15°	1868	1868	1849	1830	1823	525
25°	1618	1609	1583	1527	1485	743
35°	1313	1304	1240	1146	1118	821
45°	1008	987	902	827	794	776
55°	700	679	616	543	514	628
65°	416	392	355	362	301	410
75°	167	155	146	139	153	179
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°	2031.9	2031.9	2031.9	2031.9	2031.9
2.5°	2017.8	2017.8	2017.8	2015.5	2015.5
5°	1996.7	1994.4	1994.4	1992.0	1992.0
7.5°	1980.3	1977.9	1975.6	1973.2	1968.5
10°	1956.8	1956.8	1954.4	1942.7	1940.3
12.5°	1919.2	1916.8	1907.4	1891.0	1886.3
15°	1867.5	1867.5	1848.7	1829.9	1822.9
17.5°	1811.1	1808.8	1785.3	1766.5	1757.1
20°	1750.1	1745.4	1721.9	1691.3	1674.9
22.5°	1681.9	1681.9	1653.7	1613.8	1597.4
25°	1618.5	1609.1	1583.3	1526.9	1484.6
27.5°	1545.7	1531.6	1503.4	1423.5	1374.2
30°	1465.8	1458.8	1418.8	1315.5	1277.9
32.5°	1390.6	1378.9	1336.6	1228.6	1198.0
35°	1313.1	1303.7	1240.3	1146.3	1118.2
37.5°	1235.6	1223.9	1144.0	1068.8	1033.6
40°	1158.1	1144.0	1057.1	989.0	951.4
42.5°	1085.3	1066.5	981.9	909.1	866.8
45°	1007.7	986.6	902.0	826.9	794.0
47.5°	930.2	911.4	833.9	756.4	718.8
50°	848.0	831.6	761.1	683.6	643.6
52.5°	779.9	754.1	685.9	608.4	575.5
55°	700.0	678.9	615.5	542.6	514.4
57.5°	627.2	606.1	547.3	479.2	455.7
60°	559.1	528.5	479.2	420.5	401.7
62.5°	483.9	460.4	418.1	368.8	392.3
65°	415.8	392.3	354.7	361.8	300.7
67.5°	340.6	328.9	296.0	263.1	253.7
70°	277.2	263.1	251.4	216.1	206.7
72.5°	220.8	206.7	190.3	171.5	164.4
75°	166.8	155.0	145.6	138.6	152.7
77.5°	115.1	110.4	103.4	96.3	94.0
80°	75.2	72.8	70.5	68.1	65.8
82.5°	44.6	44.6	44.6	44.6	44.6
85°	23.5	25.8	28.2	30.5	32.9
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)