

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: P590219

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590219
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2HI-50-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4532.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

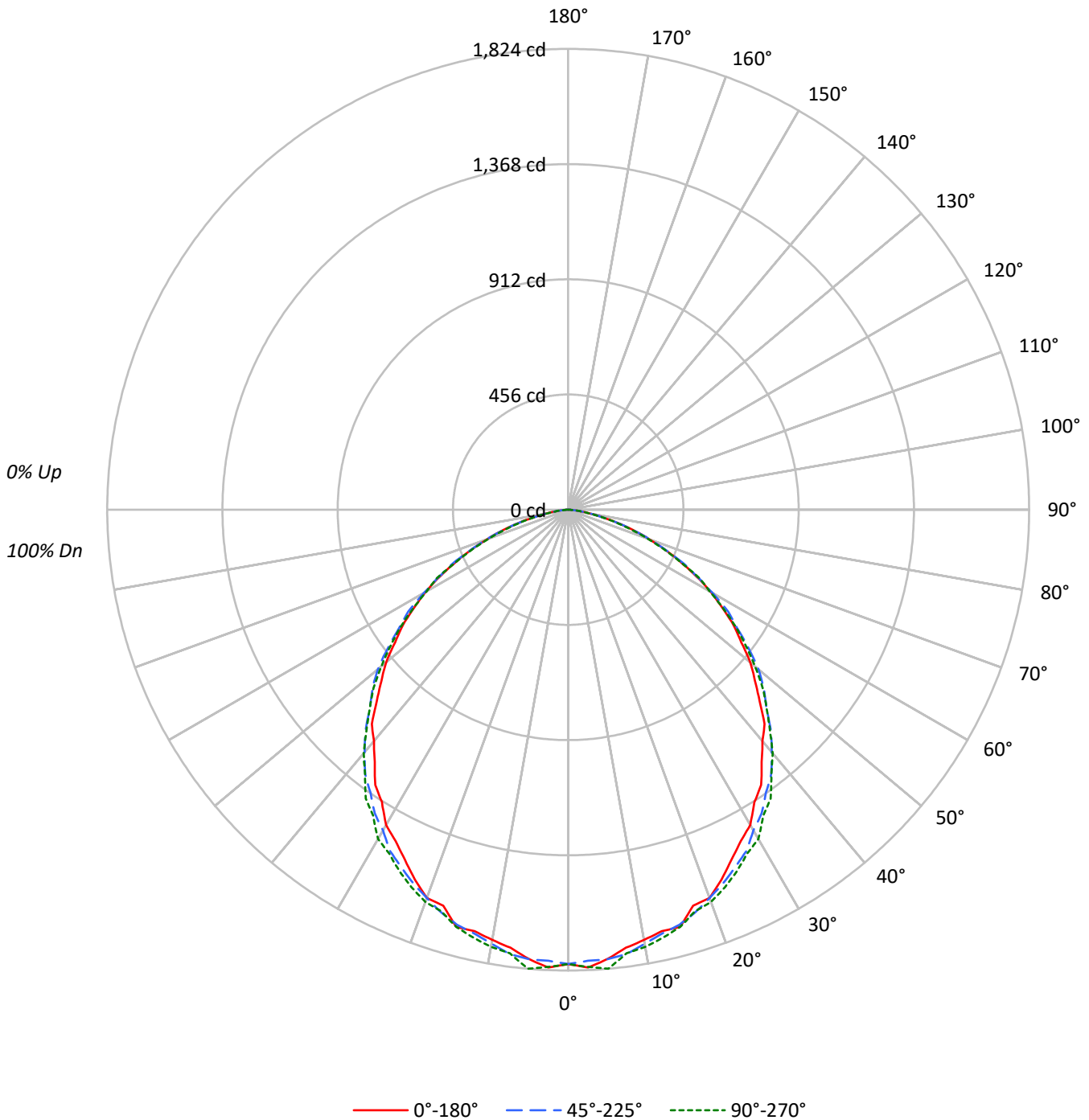
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4839	4839	4839
5°	4823	4825	4926
10°	4725	4766	4800
15°	4763	4737	4763
20°	4682	4682	4732
25°	4538	4637	4688
30°	4476	4554	4676
35°	4370	4485	4585
40°	4200	4403	4422
45°	4073	4218	4224
50°	3939	4117	4039
55°	3754	3826	3799
60°	3510	3545	3481
65°	3130	3209	3107
70°	2685	2695	2619
75°	2126	2122	2040
80°	1424	1385	1331
85°	775	766	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4327 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.1	3.7
10°-20°	479.4	10.6
20°-30°	718.2	15.8
30°-40°	851.2	18.8
40°-50°	852.8	18.8
50°-60°	723.9	16.0
60°-70°	488.0	10.8
70°-80°	214.5	4.7
80°-90°	34.9	0.8
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°	1366.7	30.2
0°-40°	2218.0	48.9
0°-60°	3794.7	83.7
0°-90°	4532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1798	1798	1798	1798	1798	
5°	1785	1781	1786	1781	1824	168
15°	1710	1690	1700	1709	1710	476
25°	1528	1537	1562	1582	1579	707
35°	1330	1334	1365	1397	1396	826
45°	1070	1090	1108	1137	1110	828
55°	800	795	816	810	810	712
65°	492	485	504	485	488	489
75°	204	200	204	190	196	219
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1798.2	1798.2	1798.2	1798.2	1798.2
2.5°	1813.7	1800.0	1787.3	1802.1	1811.2
5°	1785.4	1781.2	1786.1	1780.8	1823.7
7.5°	1748.7	1764.8	1774.0	1768.2	1770.8
10°	1729.2	1723.7	1744.3	1758.7	1756.6
12.5°	1708.3	1716.7	1717.9	1733.4	1734.8
15°	1709.5	1689.8	1700.2	1709.0	1709.7
17.5°	1643.1	1664.5	1671.6	1691.8	1666.8
20°	1635.0	1619.4	1635.0	1655.6	1652.4
22.5°	1585.0	1567.6	1601.1	1619.4	1618.2
25°	1528.4	1536.8	1561.8	1582.3	1579.0
27.5°	1478.7	1488.5	1524.2	1552.3	1534.2
30°	1440.4	1435.5	1465.7	1490.8	1504.7
32.5°	1371.9	1389.6	1424.8	1449.7	1436.5
35°	1330.4	1334.3	1365.2	1396.8	1395.8
37.5°	1257.7	1276.0	1319.4	1328.3	1320.1
40°	1195.7	1214.0	1253.3	1262.8	1258.8
42.5°	1150.0	1153.2	1186.9	1197.8	1180.4
45°	1070.3	1090.3	1108.4	1137.0	1110.0
47.5°	1002.5	1011.8	1050.8	1058.5	1044.3
50°	941.0	944.2	983.5	974.0	964.7
52.5°	863.7	877.4	899.4	897.6	886.7
55°	800.1	794.7	815.6	810.1	809.8
57.5°	723.7	733.0	750.2	741.3	727.2
60°	652.2	652.4	658.7	648.7	646.8
62.5°	572.5	575.3	576.7	564.4	584.4
65°	491.5	485.0	504.0	484.8	488.0
67.5°	417.0	420.2	418.4	406.3	410.9
70°	341.3	345.5	342.5	328.8	332.9
72.5°	272.1	267.0	270.2	253.1	261.0
75°	204.5	200.4	204.1	189.7	196.2
77.5°	139.3	142.6	140.2	132.6	137.0
80°	91.9	89.4	89.4	85.0	85.9
82.5°	53.6	51.1	50.4	49.0	51.1
85°	25.1	24.4	24.8	24.1	23.2
87.5°	9.1	9.3	9.3	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)