

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: P590170

Luminaire Tested: FSR-24-2-LD4-2HI-40-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590170
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-40-UNV-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4846.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

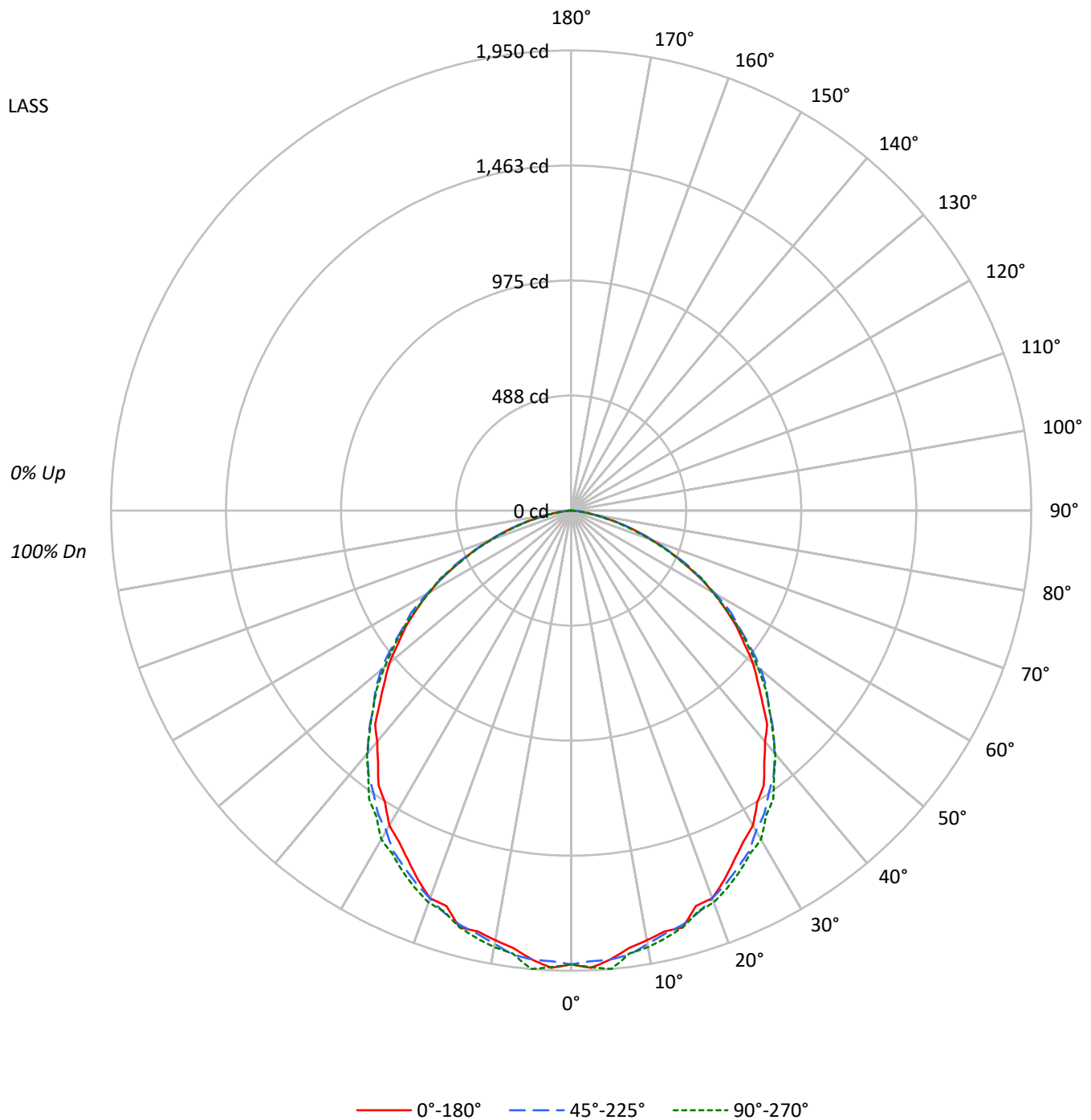
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5174	5174	5174
5°	5157	5159	5268
10°	5052	5097	5132
15°	5092	5065	5093
20°	5006	5006	5060
25°	4853	4959	5013
30°	4786	4870	5000
35°	4673	4796	4903
40°	4491	4708	4729
45°	4356	4510	4517
50°	4212	4402	4318
55°	4014	4092	4062
60°	3753	3791	3723
65°	3347	3432	3323
70°	2871	2881	2801
75°	2274	2269	2181
80°	1523	1481	1424
85°	827	821	766

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4626 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.9	3.7
10°-20°	512.6	10.6
20°-30°	768.0	15.8
30°-40°	910.2	18.8
40°-50°	911.9	18.8
50°-60°	774.0	16.0
60°-70°	521.9	10.8
70°-80°	229.3	4.7
80°-90°	37.3	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°	1461.4	30.2
0°-40°	2371.6	48.9
0°-60°	4057.6	83.7
0°-90°	4846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1923	1923	1923	1923	1923	
5°	1909	1905	1910	1904	1950	180
15°	1828	1807	1818	1827	1828	509
25°	1634	1643	1670	1692	1688	756
35°	1422	1427	1460	1494	1492	883
45°	1144	1166	1185	1216	1187	885
55°	856	850	872	866	866	761
65°	526	519	539	518	522	523
75°	219	214	218	203	210	234
85°	27	26	27	26	25	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1922.8	1922.8	1922.8	1922.8	1922.8
2.5°	1939.4	1924.8	1911.1	1927.0	1936.7
5°	1909.1	1904.6	1909.9	1904.2	1950.1
7.5°	1869.9	1887.0	1897.0	1890.7	1893.5
10°	1849.0	1843.1	1865.2	1880.6	1878.3
12.5°	1826.7	1835.6	1836.9	1853.5	1855.0
15°	1827.9	1806.8	1818.0	1827.4	1828.2
17.5°	1756.9	1779.8	1787.5	1809.1	1782.3
20°	1748.2	1731.6	1748.2	1770.3	1766.9
22.5°	1694.9	1676.2	1712.0	1731.6	1730.4
25°	1634.3	1643.2	1670.0	1691.9	1688.4
27.5°	1581.2	1591.6	1629.8	1659.9	1640.5
30°	1540.2	1535.0	1567.3	1594.1	1609.0
32.5°	1467.0	1485.8	1523.6	1550.1	1536.0
35°	1422.5	1426.7	1459.8	1493.5	1492.5
37.5°	1344.8	1364.4	1410.9	1420.3	1411.6
40°	1278.5	1298.1	1340.1	1350.3	1346.1
42.5°	1229.6	1233.1	1269.1	1280.8	1262.2
45°	1144.5	1165.8	1185.2	1215.7	1186.9
47.5°	1072.0	1081.9	1123.6	1131.8	1116.7
50°	1006.2	1009.7	1051.6	1041.4	1031.5
52.5°	923.5	938.2	961.8	959.8	948.1
55°	855.5	849.8	872.1	866.2	865.9
57.5°	773.8	783.8	802.1	792.7	777.5
60°	697.4	697.6	704.3	693.6	691.7
62.5°	612.2	615.2	616.7	603.5	624.9
65°	525.6	518.6	539.0	518.4	521.8
67.5°	445.9	449.3	447.4	434.5	439.4
70°	364.9	369.4	366.2	351.5	356.0
72.5°	291.0	285.5	289.0	270.6	279.0
75°	218.7	214.2	218.2	202.8	209.8
77.5°	149.0	152.4	149.9	141.8	146.5
80°	98.3	95.6	95.6	90.9	91.9
82.5°	57.3	54.6	53.9	52.4	54.6
85°	26.8	26.1	26.6	25.8	24.8
87.5°	9.7	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)