

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: P590204

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590204
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4699.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

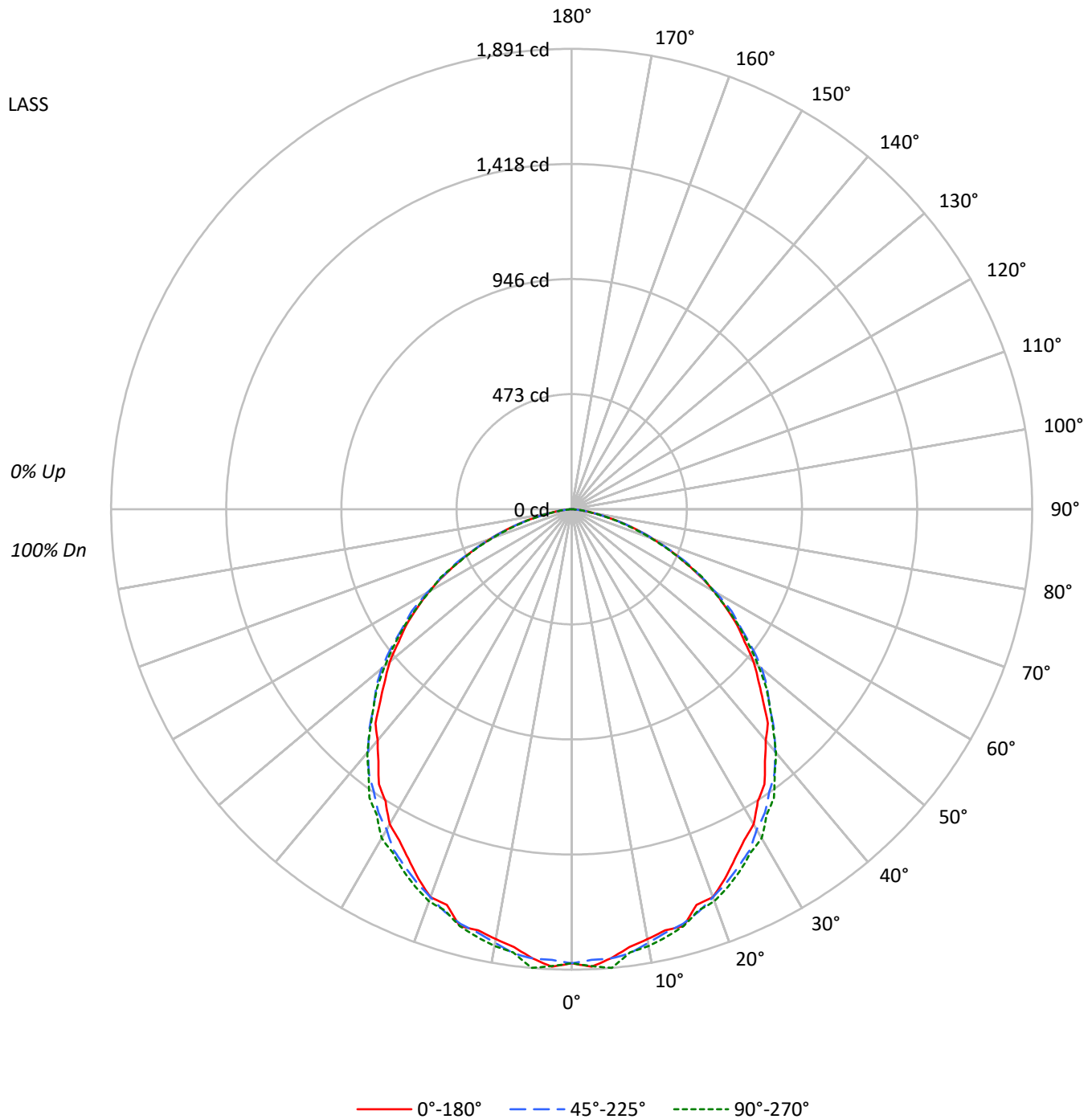
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
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°	5017	5017	5017
5°	5001	5002	5108
10°	4899	4942	4977
15°	4938	4911	4939
20°	4855	4855	4906
25°	4705	4808	4861
30°	4641	4722	4848
35°	4531	4650	4754
40°	4355	4565	4585
45°	4223	4373	4380
50°	4085	4269	4187
55°	3892	3968	3940
60°	3639	3675	3610
65°	3245	3328	3222
70°	2784	2794	2716
75°	2205	2200	2115
80°	1477	1437	1381
85°	803	797	744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4486 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.4	3.7
10°-20°	497.0	10.6
20°-30°	744.7	15.8
30°-40°	882.6	18.8
40°-50°	884.2	18.8
50°-60°	750.6	16.0
60°-70°	506.0	10.8
70°-80°	222.4	4.7
80°-90°	36.1	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°	1417.1	30.2
0°-40°	2299.7	48.9
0°-60°	3934.5	83.7
0°-90°	4699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1864	1864	1864	1864	1864	
5°	1851	1847	1852	1846	1891	175
15°	1772	1752	1763	1772	1773	494
25°	1585	1593	1619	1641	1637	733
35°	1379	1384	1416	1448	1447	856
45°	1110	1130	1149	1179	1151	858
55°	830	824	846	840	840	738
65°	510	503	523	503	506	507
75°	212	208	212	197	203	227
85°	26	25	26	25	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1864.4	1864.4	1864.4	1864.4	1864.4
2.5°	1880.6	1866.4	1853.1	1868.5	1877.9
5°	1851.2	1846.9	1851.9	1846.4	1890.9
7.5°	1813.2	1829.8	1839.4	1833.4	1836.0
10°	1792.9	1787.2	1808.6	1823.5	1821.4
12.5°	1771.3	1779.9	1781.2	1797.3	1798.7
15°	1772.5	1752.0	1762.9	1772.0	1772.7
17.5°	1703.6	1725.8	1733.2	1754.2	1728.2
20°	1695.2	1679.1	1695.2	1716.6	1713.3
22.5°	1643.5	1625.4	1660.1	1679.1	1677.9
25°	1584.7	1593.4	1619.4	1640.6	1637.2
27.5°	1533.2	1543.3	1580.4	1609.5	1590.7
30°	1493.5	1488.4	1519.7	1545.7	1560.2
32.5°	1422.5	1440.8	1477.4	1503.1	1489.4
35°	1379.4	1383.5	1415.5	1448.2	1447.3
37.5°	1304.0	1323.0	1368.1	1377.2	1368.8
40°	1239.8	1258.8	1299.5	1309.3	1305.2
42.5°	1192.3	1195.7	1230.6	1241.9	1223.9
45°	1109.8	1130.5	1149.2	1178.8	1150.9
47.5°	1039.5	1049.1	1089.5	1097.5	1082.8
50°	975.7	979.0	1019.7	1009.9	1000.2
52.5°	895.5	909.7	932.6	930.7	919.3
55°	829.6	824.0	845.7	839.9	839.7
57.5°	750.4	760.0	777.8	768.6	754.0
60°	676.2	676.4	682.9	672.6	670.7
62.5°	593.6	596.5	598.0	585.2	605.9
65°	509.6	502.9	522.6	502.6	506.0
67.5°	432.3	435.7	433.8	421.3	426.1
70°	353.9	358.2	355.1	340.9	345.2
72.5°	282.1	276.8	280.2	262.4	270.6
75°	212.1	207.7	211.6	196.7	203.4
77.5°	144.4	147.8	145.4	137.5	142.0
80°	95.3	92.7	92.7	88.1	89.1
82.5°	55.6	53.0	52.2	50.8	53.0
85°	26.0	25.3	25.8	25.0	24.1
87.5°	9.4	9.6	9.6	9.1	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)