

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: P590166

Luminaire Tested: FSR-24-2-LD4-2HI-40-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590166
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4738.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

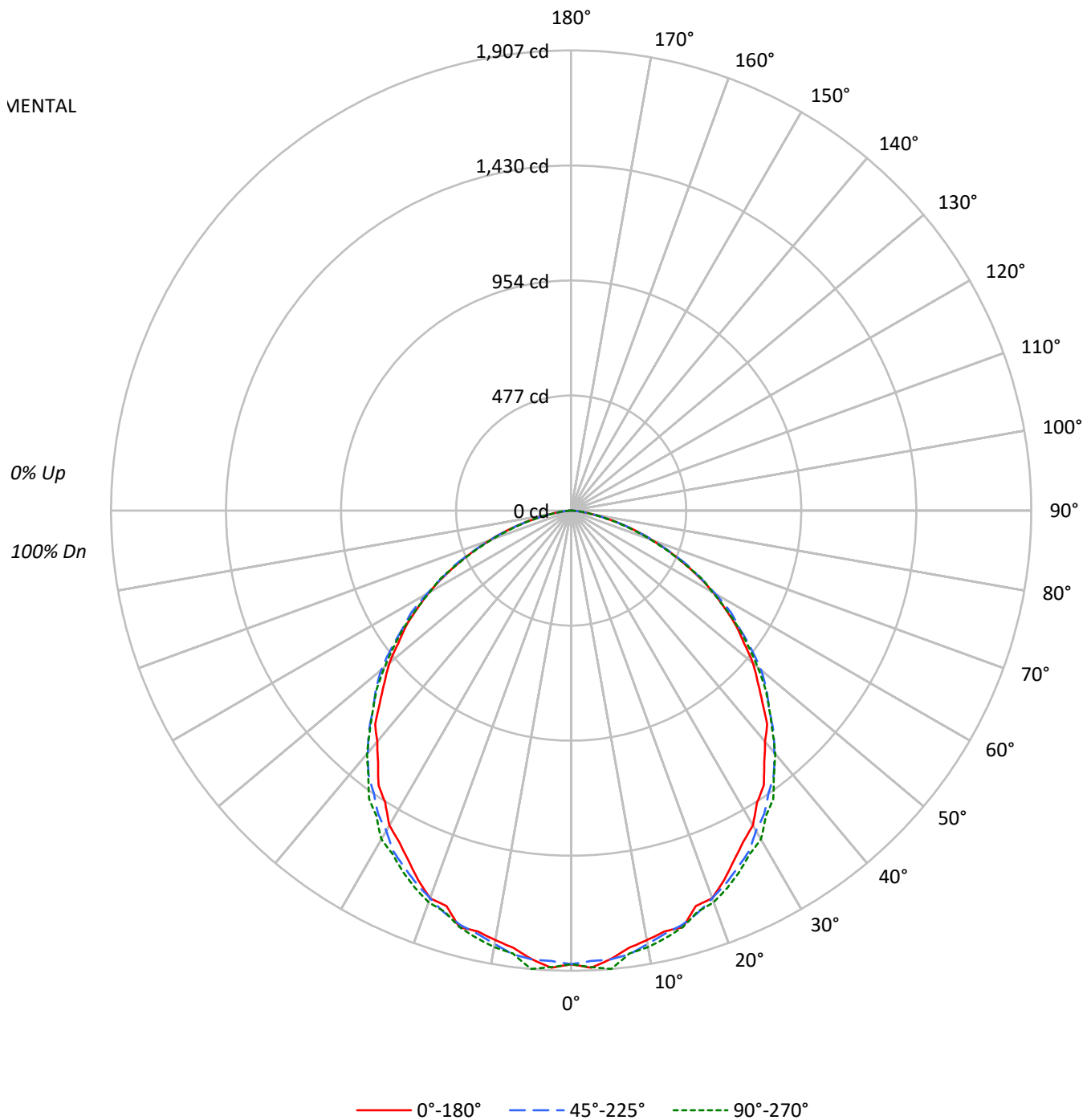
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5059	5059	5059
5°	5042	5044	5150
10°	4940	4983	5018
15°	4979	4952	4980
20°	4895	4895	4947
25°	4744	4848	4902
30°	4679	4761	4888
35°	4569	4688	4794
40°	4391	4603	4623
45°	4258	4410	4416
50°	4119	4304	4222
55°	3924	4001	3972
60°	3669	3706	3639
65°	3272	3356	3249
70°	2807	2817	2739
75°	2223	2219	2132
80°	1489	1447	1392
85°	809	803	750

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4523 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.8	3.7
10°-20°	501.2	10.6
20°-30°	750.9	15.8
30°-40°	889.9	18.8
40°-50°	891.6	18.8
50°-60°	756.8	16.0
60°-70°	510.2	10.8
70°-80°	224.2	4.7
80°-90°	36.4	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°	1428.9	30.2
0°-40°	2318.8	48.9
0°-60°	3967.1	83.7
0°-90°	4738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1880	1880	1880	1880	1880	
5°	1867	1862	1867	1862	1907	176
15°	1787	1767	1778	1787	1787	498
25°	1598	1607	1633	1654	1651	739
35°	1391	1395	1427	1460	1459	864
45°	1119	1140	1159	1189	1160	866
55°	836	831	853	847	847	744
65°	514	507	527	507	510	511
75°	214	210	213	198	205	229
85°	26	26	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°	1879.9	1879.9	1879.9	1879.9	1879.9
2.5°	1896.2	1881.9	1868.5	1884.0	1893.5
5°	1866.6	1862.2	1867.3	1861.7	1906.6
7.5°	1828.2	1845.0	1854.7	1848.6	1851.3
10°	1807.8	1802.0	1823.6	1838.7	1836.5
12.5°	1786.0	1794.7	1795.9	1812.2	1813.7
15°	1787.2	1766.6	1777.5	1786.7	1787.4
17.5°	1717.8	1740.1	1747.6	1768.7	1742.5
20°	1709.3	1693.0	1709.3	1730.9	1727.5
22.5°	1657.1	1638.9	1673.8	1693.0	1691.8
25°	1597.9	1606.6	1632.8	1654.2	1650.8
27.5°	1545.9	1556.1	1593.5	1622.9	1603.9
30°	1505.9	1500.8	1532.3	1558.5	1573.1
32.5°	1434.3	1452.7	1489.6	1515.6	1501.8
35°	1390.8	1395.0	1427.2	1460.2	1459.3
37.5°	1314.9	1334.0	1379.4	1388.6	1380.1
40°	1250.0	1269.2	1310.2	1320.2	1316.1
42.5°	1202.2	1205.6	1240.8	1252.2	1234.0
45°	1119.0	1139.8	1158.8	1188.6	1160.5
47.5°	1048.1	1057.8	1098.6	1106.6	1091.8
50°	983.8	987.2	1028.2	1018.2	1008.5
52.5°	902.9	917.3	940.3	938.4	927.0
55°	836.4	830.9	852.7	846.9	846.6
57.5°	756.6	766.3	784.3	775.0	760.2
60°	681.8	682.1	688.6	678.2	676.2
62.5°	598.6	601.5	602.9	590.1	610.9
65°	513.9	507.1	527.0	506.8	510.2
67.5°	435.9	439.3	437.4	424.8	429.6
70°	356.8	361.2	358.0	343.7	348.1
72.5°	284.5	279.1	282.5	264.6	272.8
75°	213.8	209.5	213.4	198.3	205.1
77.5°	145.6	149.0	146.6	138.6	143.2
80°	96.1	93.4	93.4	88.8	89.8
82.5°	56.1	53.4	52.7	51.2	53.4
85°	26.2	25.5	26.0	25.2	24.3
87.5°	9.5	9.7	9.7	9.2	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)