

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: P590138

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590138
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4798.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

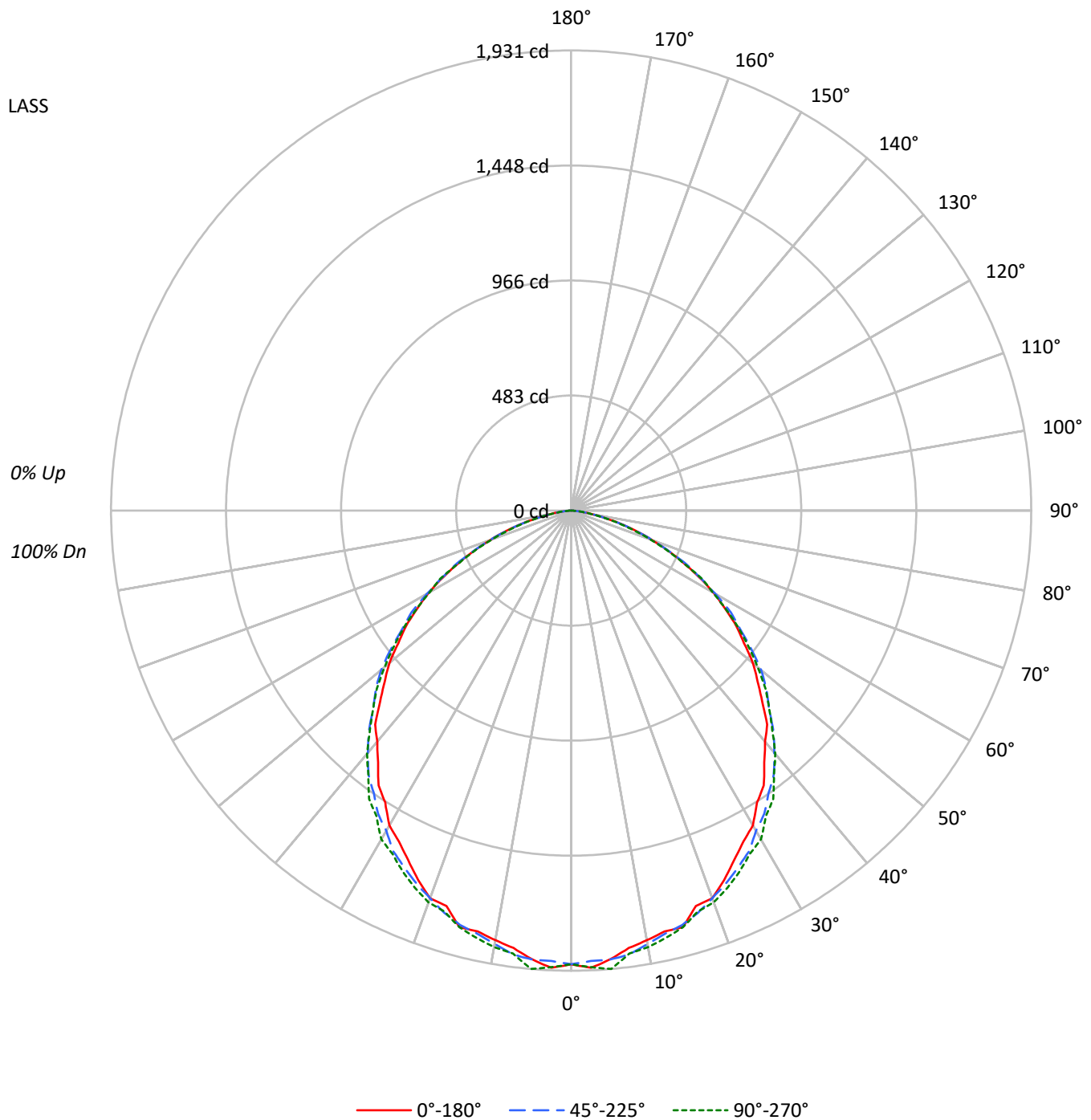
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5123	5123	5123
5°	5106	5108	5216
10°	5002	5046	5082
15°	5042	5015	5043
20°	4957	4957	5010
25°	4804	4910	4964
30°	4738	4822	4950
35°	4627	4748	4855
40°	4447	4661	4682
45°	4312	4466	4472
50°	4171	4359	4276
55°	3974	4051	4023
60°	3716	3753	3686
65°	3314	3398	3290
70°	2843	2853	2773
75°	2252	2247	2159
80°	1508	1466	1409
85°	818	812	760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4581 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.1	3.7
10°-20°	507.5	10.6
20°-30°	760.4	15.8
30°-40°	901.2	18.8
40°-50°	902.9	18.8
50°-60°	766.4	16.0
60°-70°	516.7	10.8
70°-80°	227.0	4.7
80°-90°	36.9	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°	1447.0	30.2
0°-40°	2348.1	48.9
0°-60°	4017.4	83.7
0°-90°	4798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4798.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1904	1904	1904	1904	1904	
5°	1890	1886	1891	1885	1931	178
15°	1810	1789	1800	1809	1810	504
25°	1618	1627	1654	1675	1672	748
35°	1408	1413	1445	1479	1478	874
45°	1133	1154	1174	1204	1175	877
55°	847	841	864	858	857	753
65°	520	514	534	513	517	518
75°	217	212	216	201	208	232
85°	26	26	26	26	25	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1903.7	1903.7	1903.7	1903.7	1903.7
2.5°	1920.2	1905.7	1892.2	1907.9	1917.5
5°	1890.2	1885.8	1890.9	1885.3	1930.8
7.5°	1851.4	1868.3	1878.2	1872.0	1874.7
10°	1830.7	1824.8	1846.7	1861.9	1859.7
12.5°	1808.6	1817.4	1818.7	1835.1	1836.6
15°	1809.8	1788.9	1800.0	1809.3	1810.1
17.5°	1739.5	1762.1	1769.8	1791.1	1764.6
20°	1730.9	1714.5	1730.9	1752.8	1749.4
22.5°	1678.1	1659.6	1695.0	1714.5	1713.2
25°	1618.1	1627.0	1653.5	1675.1	1671.7
27.5°	1565.5	1575.8	1613.7	1643.4	1624.2
30°	1524.9	1519.8	1551.7	1578.3	1593.0
32.5°	1452.4	1471.1	1508.5	1534.8	1520.8
35°	1408.4	1412.6	1445.3	1478.7	1477.8
37.5°	1331.5	1350.9	1396.9	1406.2	1397.6
40°	1265.9	1285.3	1326.8	1336.9	1332.7
42.5°	1217.5	1220.9	1256.5	1268.1	1249.6
45°	1133.1	1154.3	1173.5	1203.7	1175.2
47.5°	1061.4	1071.2	1112.5	1120.6	1105.6
50°	996.2	999.7	1041.2	1031.1	1021.3
52.5°	914.4	928.9	952.2	950.3	938.7
55°	847.0	841.4	863.5	857.6	857.4
57.5°	766.2	776.0	794.2	784.8	769.8
60°	690.5	690.7	697.3	686.8	684.8
62.5°	606.1	609.1	610.6	597.5	618.7
65°	520.4	513.5	533.6	513.2	516.7
67.5°	441.5	444.9	442.9	430.2	435.1
70°	361.3	365.8	362.6	348.1	352.5
72.5°	288.1	282.7	286.1	267.9	276.3
75°	216.6	212.1	216.1	200.8	207.7
77.5°	147.5	150.9	148.5	140.4	145.0
80°	97.3	94.6	94.6	90.0	90.9
82.5°	56.8	54.1	53.3	51.9	54.1
85°	26.5	25.8	26.3	25.6	24.6
87.5°	9.6	9.8	9.8	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)