

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: P590587

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590587
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-LD4-3LO-50-UNV-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

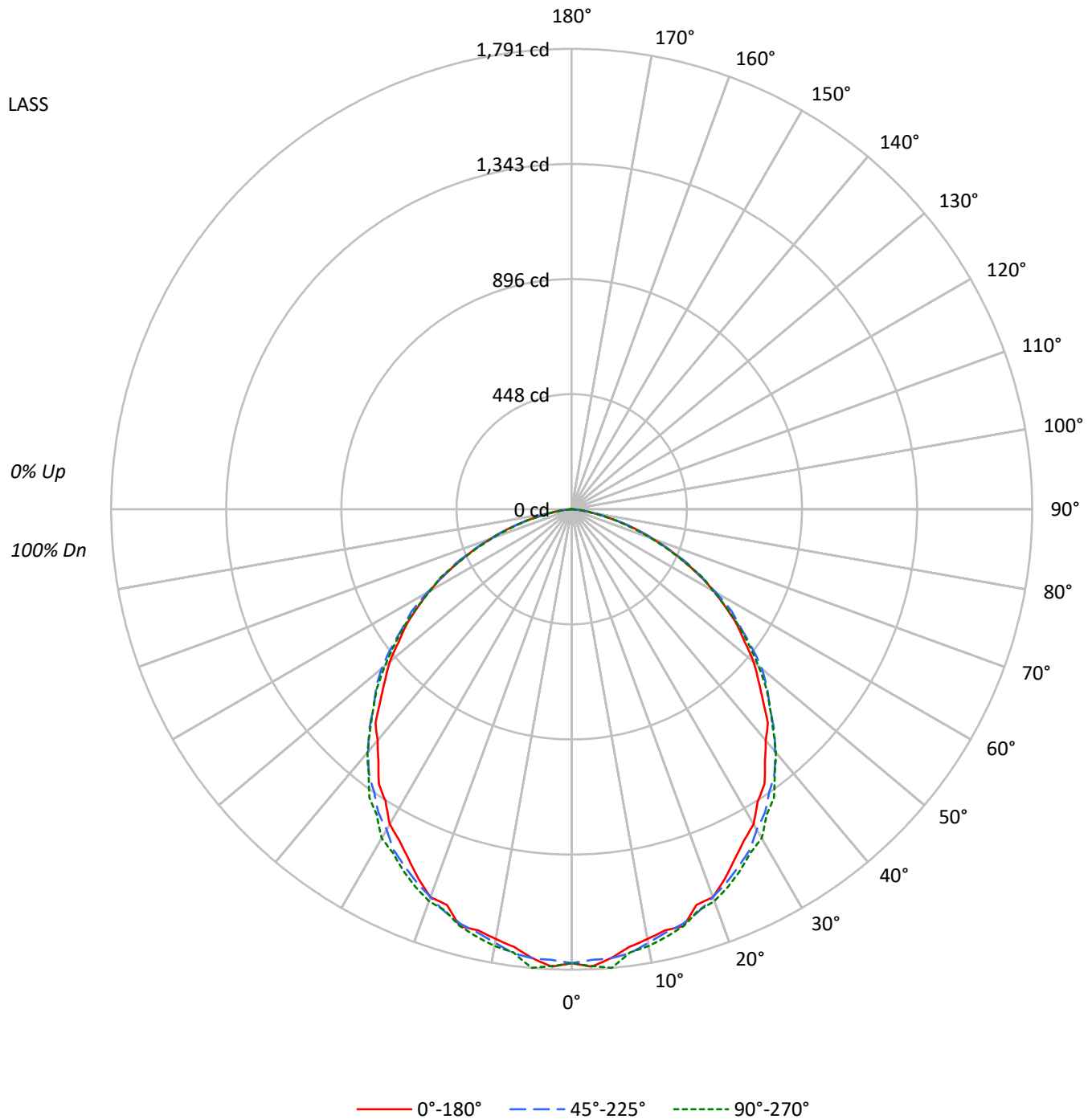
Lumens per Lamp: N/A
Luminaire Lumens: 4450.0 lumens
Efficiency: N/A
Efficacy: 126.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4751	4751	4751
5°	4736	4737	4837
10°	4639	4680	4713
15°	4676	4651	4677
20°	4597	4597	4646
25°	4456	4554	4603
30°	4395	4472	4591
35°	4291	4404	4503
40°	4124	4323	4342
45°	4000	4142	4148
50°	3868	4043	3965
55°	3686	3757	3731
60°	3447	3481	3418
65°	3073	3151	3051
70°	2637	2646	2572
75°	2088	2084	2002
80°	1399	1361	1306
85°	760	753	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4249 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.1	3.7
10°-20°	470.7	10.6
20°-30°	705.2	15.8
30°-40°	835.8	18.8
40°-50°	837.4	18.8
50°-60°	710.8	16.0
60°-70°	479.2	10.8
70°-80°	210.6	4.7
80°-90°	34.2	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°	1342.0	30.2
0°-40°	2177.8	48.9
0°-60°	3726.0	83.7
0°-90°	4450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1766	1766	1766	1766	1766	
5°	1753	1749	1754	1748	1791	165
15°	1679	1659	1669	1678	1679	468
25°	1501	1509	1534	1554	1550	694
35°	1306	1310	1340	1372	1371	811
45°	1051	1071	1088	1116	1090	813
55°	786	780	801	795	795	699
65°	483	476	495	476	479	480
75°	201	197	200	186	193	215
85°	25	24	24	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1765.6	1765.6	1765.6	1765.6	1765.6
2.5°	1780.9	1767.5	1754.9	1769.5	1778.4
5°	1753.1	1749.0	1753.8	1748.5	1790.7
7.5°	1717.1	1732.8	1741.9	1736.2	1738.7
10°	1697.9	1692.5	1712.8	1726.9	1724.8
12.5°	1677.4	1685.6	1686.8	1702.0	1703.4
15°	1678.6	1659.2	1669.4	1678.1	1678.8
17.5°	1613.4	1634.3	1641.4	1661.2	1636.6
20°	1605.4	1590.1	1605.4	1625.7	1622.5
22.5°	1556.4	1539.3	1572.1	1590.1	1589.0
25°	1500.7	1509.0	1533.6	1553.6	1550.4
27.5°	1452.0	1461.5	1496.6	1524.2	1506.4
30°	1414.3	1409.6	1439.2	1463.8	1477.5
32.5°	1347.1	1364.4	1399.1	1423.5	1410.5
35°	1306.3	1310.2	1340.5	1371.5	1370.6
37.5°	1234.9	1252.9	1295.6	1304.2	1296.3
40°	1174.1	1192.1	1230.6	1239.9	1236.1
42.5°	1129.1	1132.3	1165.4	1176.1	1159.0
45°	1051.0	1070.6	1088.3	1116.4	1089.9
47.5°	984.4	993.5	1031.8	1039.3	1025.4
50°	924.0	927.2	965.7	956.3	947.2
52.5°	848.1	861.5	883.2	881.3	870.6
55°	785.6	780.4	800.9	795.4	795.2
57.5°	710.6	719.7	736.6	727.9	714.0
60°	640.4	640.6	646.8	637.0	635.1
62.5°	562.2	564.9	566.3	554.2	573.8
65°	482.6	476.2	494.9	476.0	479.2
67.5°	409.4	412.6	410.8	399.0	403.5
70°	335.1	339.2	336.3	322.8	326.9
72.5°	267.2	262.2	265.4	248.5	256.2
75°	200.8	196.7	200.4	186.3	192.6
77.5°	136.8	140.0	137.7	130.2	134.5
80°	90.3	87.8	87.8	83.4	84.3
82.5°	52.7	50.2	49.5	48.1	50.2
85°	24.6	23.9	24.4	23.7	22.8
87.5°	8.9	9.1	9.1	8.7	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)