

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: P590060

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-82-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590060
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-LD4-1STD-35-UNV-82-97-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1771.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

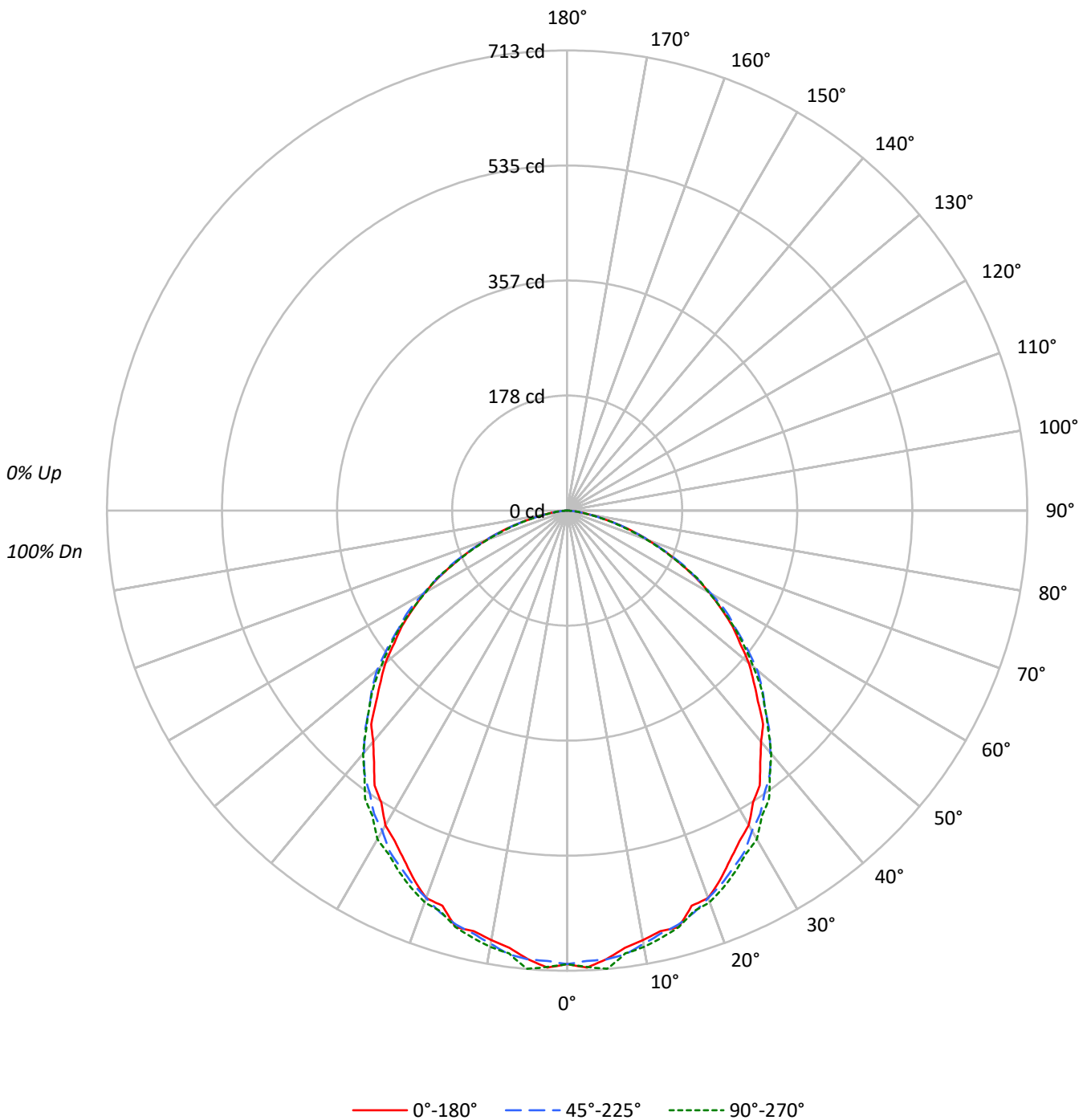
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1891	1891	1891
5°	1885	1885	1925
10°	1846	1862	1876
15°	1861	1851	1861
20°	1830	1830	1849
25°	1773	1812	1832
30°	1749	1780	1827
35°	1708	1753	1792
40°	1641	1720	1728
45°	1592	1648	1651
50°	1539	1609	1578
55°	1467	1495	1485
60°	1372	1385	1361
65°	1223	1254	1214
70°	1050	1053	1024
75°	831	829	797
80°	556	541	521
85°	303	299	281

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1691 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.1	3.7
10°-20°	187.3	10.6
20°-30°	280.7	15.8
30°-40°	332.6	18.8
40°-50°	333.3	18.8
50°-60°	282.9	16.0
60°-70°	190.7	10.8
70°-80°	83.8	4.7
80°-90°	13.6	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°	534.1	30.2
0°-40°	866.7	48.9
0°-60°	1482.9	83.7
0°-90°	1771.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1771.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	698	696	698	696	713	66
15°	668	660	664	668	668	186
25°	597	600	610	618	617	276
35°	520	521	534	546	546	323
45°	418	426	433	444	434	324
55°	313	311	319	316	316	278
65°	192	190	197	189	191	191
75°	80	78	80	74	77	86
85°	10	10	10	9	9	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	702.7	702.7	702.7	702.7	702.7
2.5°	708.8	703.4	698.4	704.2	707.8
5°	697.7	696.1	698.0	695.9	712.7
7.5°	683.4	689.6	693.3	691.0	692.0
10°	675.7	673.6	681.6	687.3	686.4
12.5°	667.6	670.8	671.3	677.4	677.9
15°	668.0	660.3	664.4	667.8	668.1
17.5°	642.1	650.4	653.2	661.1	651.3
20°	638.9	632.8	638.9	647.0	645.7
22.5°	619.4	612.6	625.7	632.8	632.4
25°	597.3	600.5	610.3	618.3	617.0
27.5°	577.8	581.7	595.6	606.6	599.5
30°	562.9	561.0	572.8	582.6	588.0
32.5°	536.1	543.0	556.8	566.5	561.3
35°	519.9	521.4	533.5	545.8	545.5
37.5°	491.5	498.6	515.6	519.1	515.9
40°	467.2	474.4	489.7	493.5	491.9
42.5°	449.4	450.6	463.8	468.1	461.3
45°	418.3	426.1	433.1	444.3	433.8
47.5°	391.8	395.4	410.6	413.6	408.1
50°	367.7	369.0	384.3	380.6	377.0
52.5°	337.5	342.9	351.5	350.8	346.5
55°	312.6	310.6	318.7	316.5	316.5
57.5°	282.8	286.4	293.1	289.7	284.2
60°	254.9	254.9	257.4	253.5	252.8
62.5°	223.7	224.8	225.4	220.6	228.4
65°	192.1	189.5	197.0	189.4	190.7
67.5°	162.9	164.2	163.5	158.8	160.6
70°	133.4	135.0	133.8	128.5	130.1
72.5°	106.3	104.3	105.6	98.9	102.0
75°	79.9	78.3	79.7	74.1	76.7
77.5°	54.4	55.7	54.8	51.8	53.5
80°	35.9	34.9	34.9	33.2	33.6
82.5°	21.0	20.0	19.7	19.1	20.0
85°	9.8	9.5	9.7	9.4	9.1
87.5°	3.5	3.6	3.6	3.4	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)