

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: P590092

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-82-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590092
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1789.0 lumens
Efficiency: N/A
Efficacy: 107.8 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

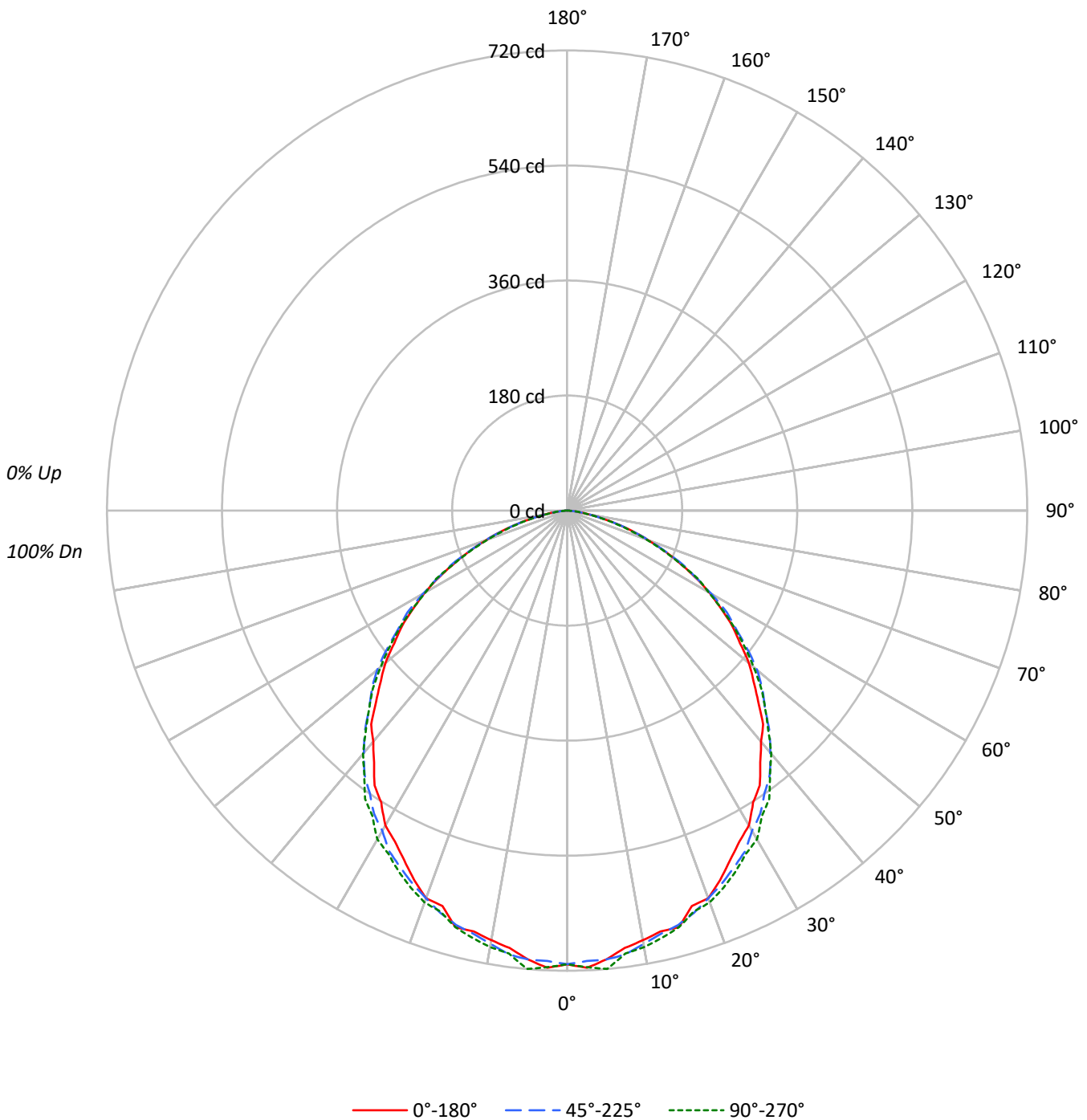
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1910	1910	1910
5°	1904	1905	1945
10°	1865	1882	1895
15°	1880	1870	1880
20°	1848	1848	1868
25°	1791	1830	1851
30°	1767	1798	1846
35°	1725	1770	1810
40°	1658	1738	1746
45°	1608	1665	1668
50°	1555	1625	1594
55°	1482	1511	1500
60°	1385	1399	1374
65°	1235	1267	1226
70°	1060	1064	1034
75°	839	838	805
80°	563	547	525
85°	306	303	284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1708 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.7
10°-20°	189.2	10.6
20°-30°	283.5	15.8
30°-40°	336.0	18.8
40°-50°	336.6	18.8
50°-60°	285.7	16.0
60°-70°	192.7	10.8
70°-80°	84.7	4.7
80°-90°	13.8	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°	539.5	30.2
0°-40°	875.5	48.9
0°-60°	1497.9	83.7
0°-90°	1789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1789.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	705	703	705	703	720	66
15°	675	667	671	675	675	188
25°	603	607	616	625	623	279
35°	525	527	539	551	551	326
45°	422	430	438	449	438	327
55°	316	314	322	320	320	281
65°	194	192	199	191	193	193
75°	81	79	81	75	77	87
85°	10	10	10	10	9	14
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	709.8	709.8	709.8	709.8	709.8
2.5°	716.0	710.6	705.5	711.4	715.0
5°	704.8	703.1	705.1	703.0	719.9
7.5°	690.3	696.6	700.3	698.0	699.0
10°	682.6	680.4	688.6	694.2	693.4
12.5°	674.4	677.7	678.1	684.3	684.8
15°	674.8	667.0	671.2	674.6	674.9
17.5°	648.6	657.0	659.9	667.9	658.0
20°	645.4	639.3	645.4	653.6	652.3
22.5°	625.7	618.8	632.0	639.3	638.8
25°	603.3	606.6	616.5	624.6	623.3
27.5°	583.7	587.6	601.7	612.8	605.6
30°	568.6	566.7	578.6	588.5	594.0
32.5°	541.6	548.5	562.5	572.3	567.0
35°	525.2	526.7	538.9	551.4	551.0
37.5°	496.5	503.7	520.8	524.3	521.1
40°	472.0	479.2	494.7	498.5	496.9
42.5°	453.9	455.2	468.5	472.8	465.9
45°	422.5	430.4	437.5	448.8	438.2
47.5°	395.7	399.4	414.8	417.8	412.2
50°	371.5	372.7	388.2	384.5	380.8
52.5°	340.9	346.3	355.1	354.3	350.0
55°	315.8	313.7	322.0	319.8	319.7
57.5°	285.7	289.3	296.1	292.6	287.0
60°	257.4	257.5	260.0	256.1	255.3
62.5°	226.0	227.1	227.7	222.8	230.7
65°	194.0	191.5	199.0	191.4	192.6
67.5°	164.6	165.9	165.2	160.4	162.2
70°	134.7	136.4	135.2	129.8	131.4
72.5°	107.4	105.4	106.7	99.9	103.0
75°	80.7	79.1	80.6	74.9	77.4
77.5°	55.0	56.3	55.4	52.3	54.1
80°	36.3	35.3	35.3	33.5	33.9
82.5°	21.2	20.2	19.9	19.3	20.2
85°	9.9	9.6	9.8	9.5	9.2
87.5°	3.6	3.7	3.7	3.5	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)