

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: P590083

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590083
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-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 1856.0 lumens
Efficiency: N/A
Efficacy: 111.8 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

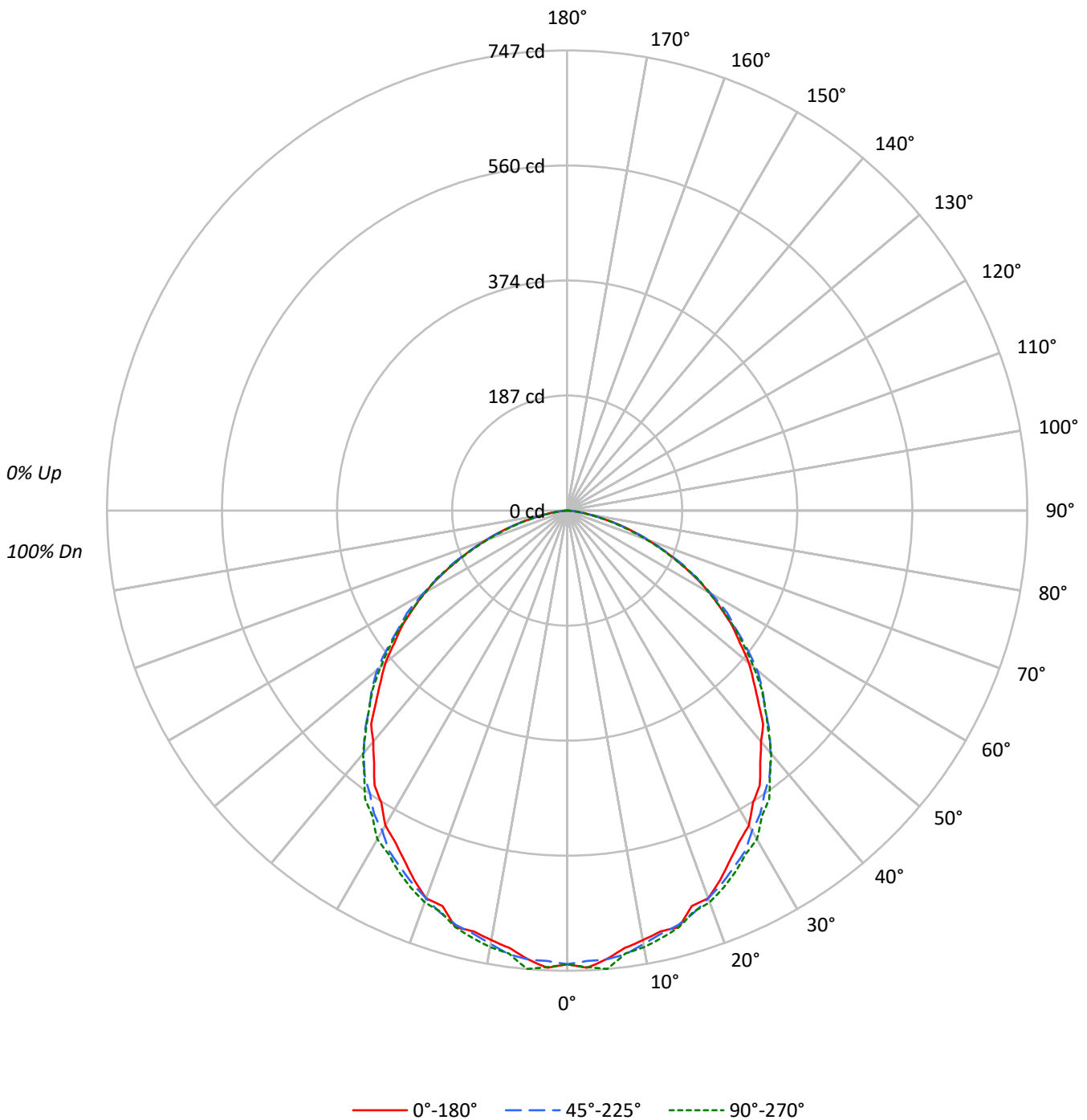
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1982	1982	1982
5°	1975	1976	2018
10°	1935	1952	1966
15°	1950	1940	1951
20°	1918	1918	1938
25°	1858	1899	1920
30°	1833	1865	1915
35°	1790	1837	1878
40°	1720	1803	1811
45°	1668	1727	1730
50°	1613	1686	1654
55°	1537	1567	1556
60°	1438	1452	1426
65°	1282	1314	1273
70°	1100	1103	1072
75°	871	869	835
80°	584	567	545
85°	318	315	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	3.7
10°-20°	196.3	10.6
20°-30°	294.1	15.8
30°-40°	348.6	18.8
40°-50°	349.3	18.8
50°-60°	296.5	16.0
60°-70°	199.9	10.8
70°-80°	87.8	4.7
80°-90°	14.3	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°	559.7	30.2
0°-40°	908.3	48.9
0°-60°	1554.0	83.7
0°-90°	1856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	731	730	732	729	747	69
15°	700	692	696	700	700	195
25°	626	629	640	648	647	289
35°	545	546	559	572	572	338
45°	438	446	454	466	455	339
55°	328	326	334	332	332	291
65°	201	199	206	198	200	200
75°	84	82	84	78	80	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	736.4	736.4	736.4	736.4	736.4
2.5°	742.8	737.2	731.9	738.0	741.7
5°	731.2	729.5	731.5	729.3	746.9
7.5°	716.2	722.7	726.5	724.1	725.2
10°	708.2	705.9	714.4	720.2	719.4
12.5°	699.6	703.0	703.5	709.9	710.5
15°	700.1	692.0	696.3	699.9	700.2
17.5°	672.9	681.6	684.6	692.9	682.6
20°	669.6	663.2	669.6	678.0	676.7
22.5°	649.1	642.0	655.7	663.2	662.7
25°	625.9	629.4	639.6	648.0	646.7
27.5°	605.6	609.6	624.2	635.7	628.3
30°	589.9	587.9	600.3	610.5	616.2
32.5°	561.8	569.1	583.5	593.7	588.3
35°	544.8	546.4	559.1	572.0	571.6
37.5°	515.1	522.6	540.4	544.0	540.6
40°	489.7	497.2	513.3	517.2	515.5
42.5°	470.9	472.3	486.1	490.5	483.4
45°	438.3	446.5	453.9	465.6	454.6
47.5°	410.6	414.4	430.3	433.5	427.7
50°	385.4	386.7	402.8	398.9	395.1
52.5°	353.7	359.3	368.3	367.6	363.1
55°	327.7	325.5	334.0	331.7	331.6
57.5°	296.4	300.2	307.2	303.6	297.8
60°	267.1	267.2	269.7	265.7	264.9
62.5°	234.5	235.6	236.2	231.1	239.3
65°	201.3	198.6	206.4	198.5	199.9
67.5°	170.8	172.1	171.3	166.4	168.3
70°	139.8	141.5	140.2	134.6	136.3
72.5°	111.4	109.3	110.7	103.6	106.9
75°	83.8	82.1	83.6	77.7	80.3
77.5°	57.0	58.4	57.4	54.3	56.1
80°	37.7	36.6	36.6	34.8	35.2
82.5°	22.0	20.9	20.6	20.1	20.9
85°	10.3	10.0	10.2	9.9	9.5
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)