

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: P590050

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590050
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 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: 1858.0 lumens
Efficiency: N/A
Efficacy: 111.9 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

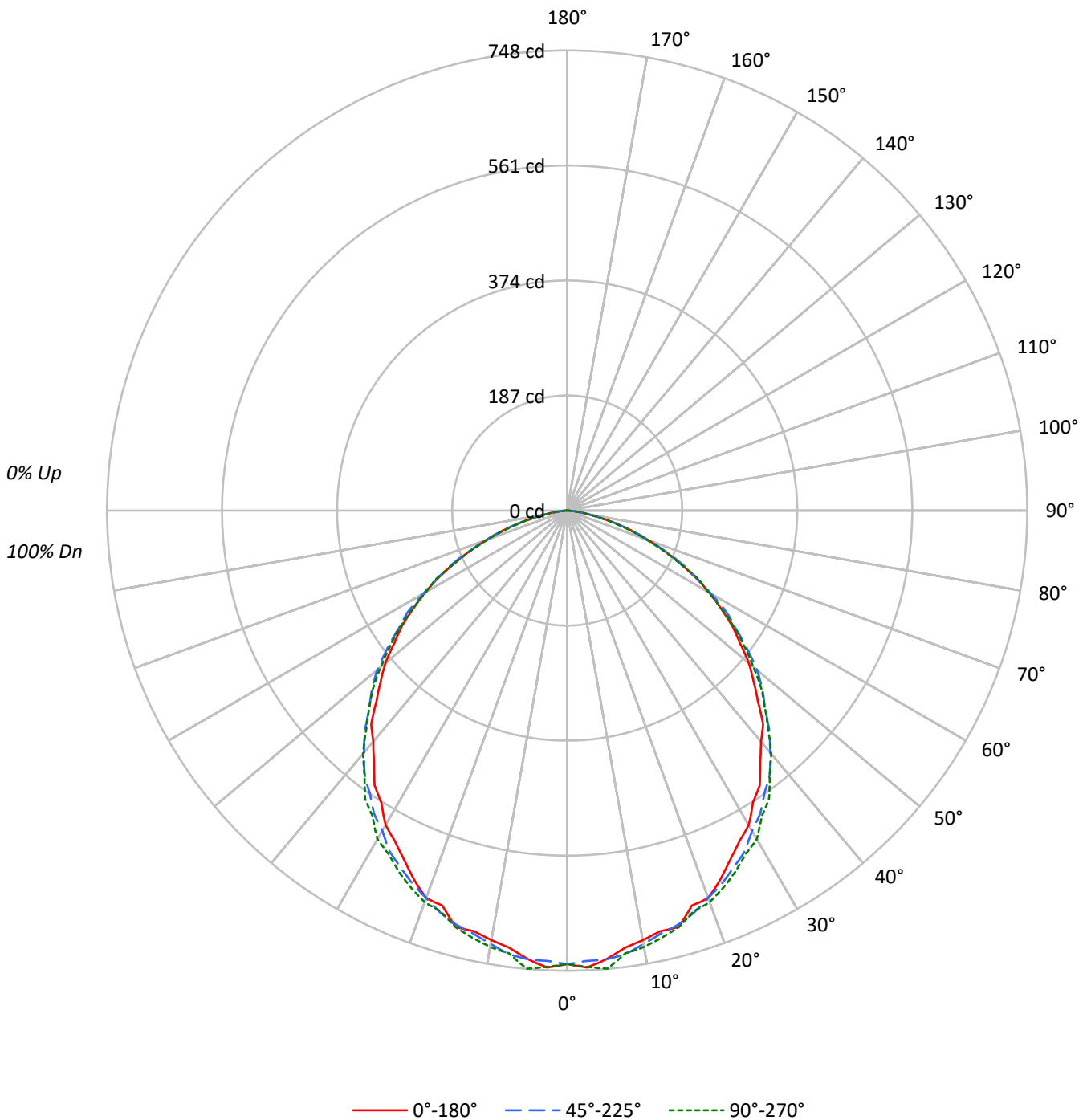
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	1984	1984	1984
5°	1977	1978	2020
10°	1937	1954	1968
15°	1952	1942	1953
20°	1920	1920	1940
25°	1860	1901	1922
30°	1835	1867	1917
35°	1792	1839	1880
40°	1722	1805	1813
45°	1670	1729	1732
50°	1615	1688	1656
55°	1539	1569	1558
60°	1439	1453	1427
65°	1283	1316	1274
70°	1101	1105	1074
75°	872	870	836
80°	584	567	545
85°	318	315	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1774 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	3.7
10°-20°	196.5	10.6
20°-30°	294.4	15.8
30°-40°	349.0	18.8
40°-50°	349.6	18.8
50°-60°	296.8	16.0
60°-70°	200.1	10.8
70°-80°	87.9	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°	560.3	30.2
0°-40°	909.3	48.9
0°-60°	1555.7	83.7
0°-90°	1858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	732	730	732	730	748	69
15°	701	693	697	701	701	195
25°	627	630	640	649	647	290
35°	545	547	560	573	572	339
45°	439	447	454	466	455	339
55°	328	326	334	332	332	292
65°	202	199	207	199	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°	737.2	737.2	737.2	737.2	737.2
2.5°	743.6	738.0	732.7	738.8	742.5
5°	732.0	730.3	732.3	730.1	747.7
7.5°	716.9	723.5	727.3	724.9	726.0
10°	708.9	706.7	715.1	721.0	720.2
12.5°	700.4	703.8	704.3	710.7	711.2
15°	700.8	692.8	697.0	700.7	700.9
17.5°	673.6	682.4	685.3	693.6	683.3
20°	670.3	663.9	670.3	678.8	677.4
22.5°	649.8	642.7	656.4	663.9	663.4
25°	626.6	630.0	640.3	648.7	647.4
27.5°	606.2	610.2	624.9	636.4	629.0
30°	590.5	588.5	600.9	611.2	616.9
32.5°	562.4	569.7	584.2	594.3	588.9
35°	545.4	547.0	559.7	572.6	572.3
37.5°	515.6	523.1	540.9	544.6	541.2
40°	490.2	497.7	513.8	517.7	516.1
42.5°	471.5	472.8	486.6	491.1	483.9
45°	438.8	447.0	454.4	466.1	455.1
47.5°	411.0	414.8	430.8	433.9	428.1
50°	385.8	387.1	403.2	399.3	395.5
52.5°	354.1	359.7	368.7	368.0	363.5
55°	328.0	325.8	334.4	332.1	332.0
57.5°	296.7	300.5	307.5	303.9	298.1
60°	267.4	267.5	270.0	265.9	265.2
62.5°	234.7	235.9	236.4	231.4	239.6
65°	201.5	198.8	206.6	198.7	200.1
67.5°	171.0	172.3	171.5	166.6	168.5
70°	139.9	141.6	140.4	134.8	136.5
72.5°	111.6	109.5	110.8	103.8	107.0
75°	83.9	82.1	83.7	77.8	80.4
77.5°	57.1	58.4	57.5	54.4	56.2
80°	37.7	36.6	36.6	34.8	35.2
82.5°	22.0	20.9	20.7	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)