

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: P590112

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590112
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-50-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1785.0 lumens
Efficiency: N/A
Efficacy: 107.5 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

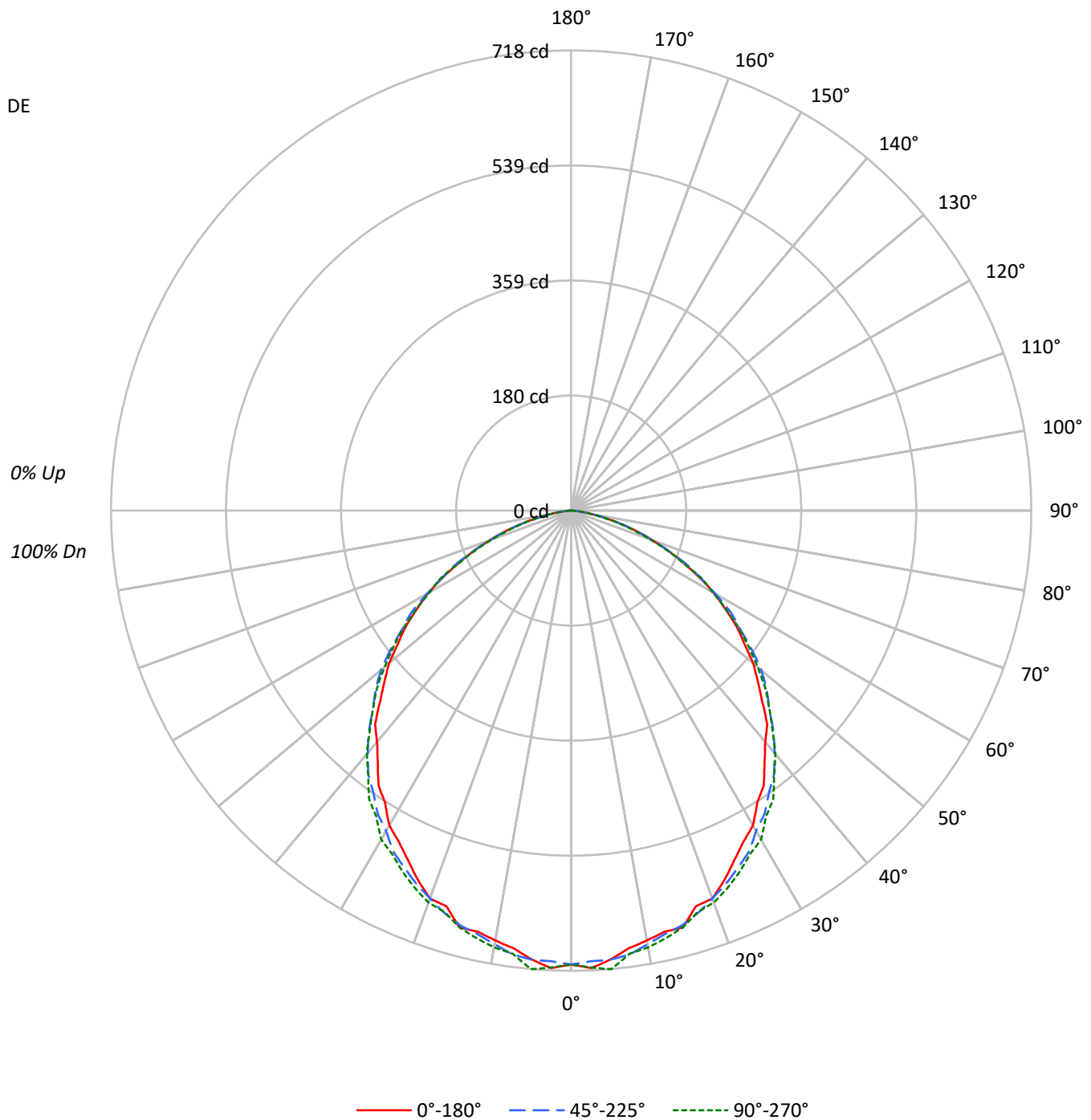
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1906	1906	1906
5°	1900	1900	1940
10°	1861	1877	1891
15°	1876	1866	1876
20°	1844	1844	1864
25°	1787	1827	1847
30°	1763	1794	1842
35°	1721	1766	1806
40°	1654	1734	1742
45°	1604	1662	1664
50°	1551	1622	1591
55°	1478	1507	1497
60°	1383	1396	1371
65°	1233	1264	1224
70°	1057	1061	1031
75°	838	836	804
80°	561	545	524
85°	306	303	281

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	3.7
10°-20°	188.8	10.6
20°-30°	282.9	15.8
30°-40°	335.3	18.8
40°-50°	335.9	18.8
50°-60°	285.1	16.0
60°-70°	192.2	10.8
70°-80°	84.5	4.7
80°-90°	13.7	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°	538.3	30.2
0°-40°	873.6	48.9
0°-60°	1494.6	83.7
0°-90°	1785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	703	702	704	701	718	66
15°	673	666	670	673	673	188
25°	602	605	615	623	622	278
35°	524	526	538	550	550	325
45°	422	429	437	448	437	326
55°	315	313	321	319	319	280
65°	194	191	198	191	192	193
75°	81	79	80	75	77	86
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°	708.2	708.2	708.2	708.2	708.2
2.5°	714.4	709.0	703.9	709.8	713.4
5°	703.2	701.6	703.5	701.4	718.3
7.5°	688.8	695.1	698.7	696.4	697.5
10°	681.1	678.9	687.0	692.7	691.9
12.5°	672.9	676.1	676.6	682.7	683.3
15°	673.3	665.5	669.7	673.1	673.4
17.5°	647.2	655.6	658.4	666.4	656.5
20°	644.0	637.8	644.0	652.1	650.8
22.5°	624.3	617.4	630.6	637.8	637.4
25°	602.0	605.3	615.2	623.2	621.9
27.5°	582.4	586.3	600.3	611.4	604.3
30°	567.3	565.4	577.3	587.2	592.7
32.5°	540.3	547.3	561.2	571.0	565.8
35°	524.0	525.5	537.7	550.1	549.8
37.5°	495.4	502.6	519.7	523.2	520.0
40°	470.9	478.2	493.6	497.4	495.8
42.5°	452.9	454.2	467.5	471.8	464.9
45°	421.6	429.4	436.6	447.8	437.2
47.5°	394.9	398.5	413.9	416.9	411.3
50°	370.6	371.9	387.4	383.6	380.0
52.5°	340.2	345.6	354.3	353.5	349.2
55°	315.1	313.0	321.2	319.1	319.0
57.5°	285.0	288.7	295.5	292.0	286.4
60°	256.9	257.0	259.4	255.5	254.8
62.5°	225.5	226.6	227.1	222.3	230.2
65°	193.6	191.0	198.5	190.9	192.2
67.5°	164.2	165.5	164.8	160.0	161.9
70°	134.4	136.1	134.9	129.5	131.1
72.5°	107.2	105.2	106.4	99.7	102.8
75°	80.6	78.9	80.4	74.7	77.3
77.5°	54.9	56.1	55.2	52.2	54.0
80°	36.2	35.2	35.2	33.5	33.8
82.5°	21.1	20.1	19.8	19.3	20.1
85°	9.9	9.6	9.8	9.5	9.1
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)