

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: P590079

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590079
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1814.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

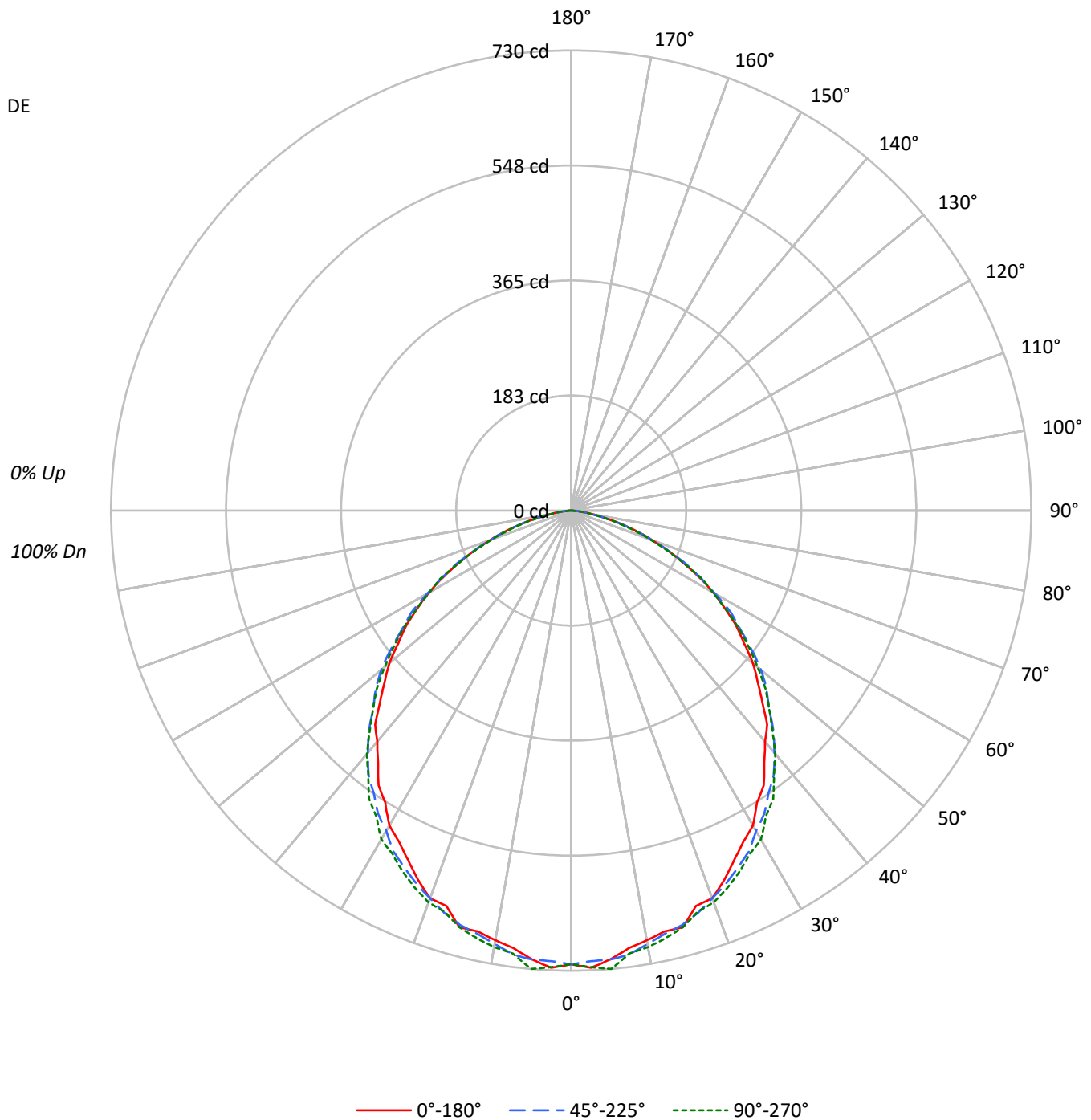
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1937	1937	1937
5°	1930	1931	1972
10°	1891	1908	1921
15°	1906	1896	1906
20°	1874	1874	1894
25°	1817	1856	1877
30°	1791	1823	1872
35°	1749	1795	1835
40°	1681	1762	1770
45°	1630	1689	1691
50°	1577	1648	1616
55°	1502	1532	1521
60°	1405	1419	1393
65°	1252	1285	1244
70°	1075	1079	1049
75°	852	849	816
80°	570	555	533
85°	309	306	287

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1732 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.7	3.7
10°-20°	191.9	10.6
20°-30°	287.5	15.8
30°-40°	340.7	18.8
40°-50°	341.4	18.8
50°-60°	289.7	16.0
60°-70°	195.3	10.8
70°-80°	85.8	4.7
80°-90°	13.9	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°	547.1	30.2
0°-40°	887.8	48.9
0°-60°	1518.9	83.7
0°-90°	1814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	715	713	715	713	730	67
15°	684	676	680	684	684	191
25°	612	615	625	633	632	283
35°	532	534	546	559	559	331
45°	428	436	444	455	444	331
55°	320	318	326	324	324	285
65°	197	194	202	194	195	196
75°	82	80	82	76	78	88
85°	10	10	10	10	9	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	719.7	719.7	719.7	719.7	719.7
2.5°	726.0	720.5	715.4	721.3	725.0
5°	714.6	713.0	714.9	712.8	730.0
7.5°	700.0	706.4	710.1	707.8	708.8
10°	692.1	689.9	698.2	704.0	703.1
12.5°	683.8	687.1	687.6	693.8	694.4
15°	684.2	676.4	680.5	684.1	684.3
17.5°	657.7	666.2	669.1	677.2	667.2
20°	654.4	648.2	654.4	662.7	661.4
22.5°	634.4	627.5	640.9	648.2	647.7
25°	611.8	615.1	625.1	633.3	632.0
27.5°	591.9	595.8	610.1	621.3	614.1
30°	576.5	574.6	586.7	596.7	602.3
32.5°	549.1	556.2	570.3	580.3	575.0
35°	532.5	534.1	546.4	559.1	558.7
37.5°	503.4	510.7	528.1	531.7	528.4
40°	478.6	485.9	501.6	505.5	503.9
42.5°	460.3	461.6	475.1	479.4	472.5
45°	428.4	436.4	443.7	455.1	444.3
47.5°	401.3	405.0	420.6	423.7	418.0
50°	376.6	377.9	393.7	389.8	386.1
52.5°	345.7	351.2	360.0	359.3	354.9
55°	320.2	318.1	326.5	324.2	324.1
57.5°	289.7	293.4	300.3	296.7	291.1
60°	261.0	261.1	263.6	259.6	258.9
62.5°	229.2	230.3	230.8	225.9	233.9
65°	196.7	194.1	201.8	194.0	195.3
67.5°	166.9	168.2	167.5	162.6	164.5
70°	136.6	138.3	137.1	131.6	133.3
72.5°	108.9	106.9	108.2	101.3	104.5
75°	81.9	80.2	81.7	75.9	78.5
77.5°	55.8	57.1	56.1	53.1	54.8
80°	36.8	35.8	35.8	34.0	34.4
82.5°	21.5	20.4	20.2	19.6	20.4
85°	10.0	9.8	9.9	9.7	9.3
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)