

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: P590081

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590081
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1581.0 lumens
Efficiency: N/A
Efficacy: 95.2 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

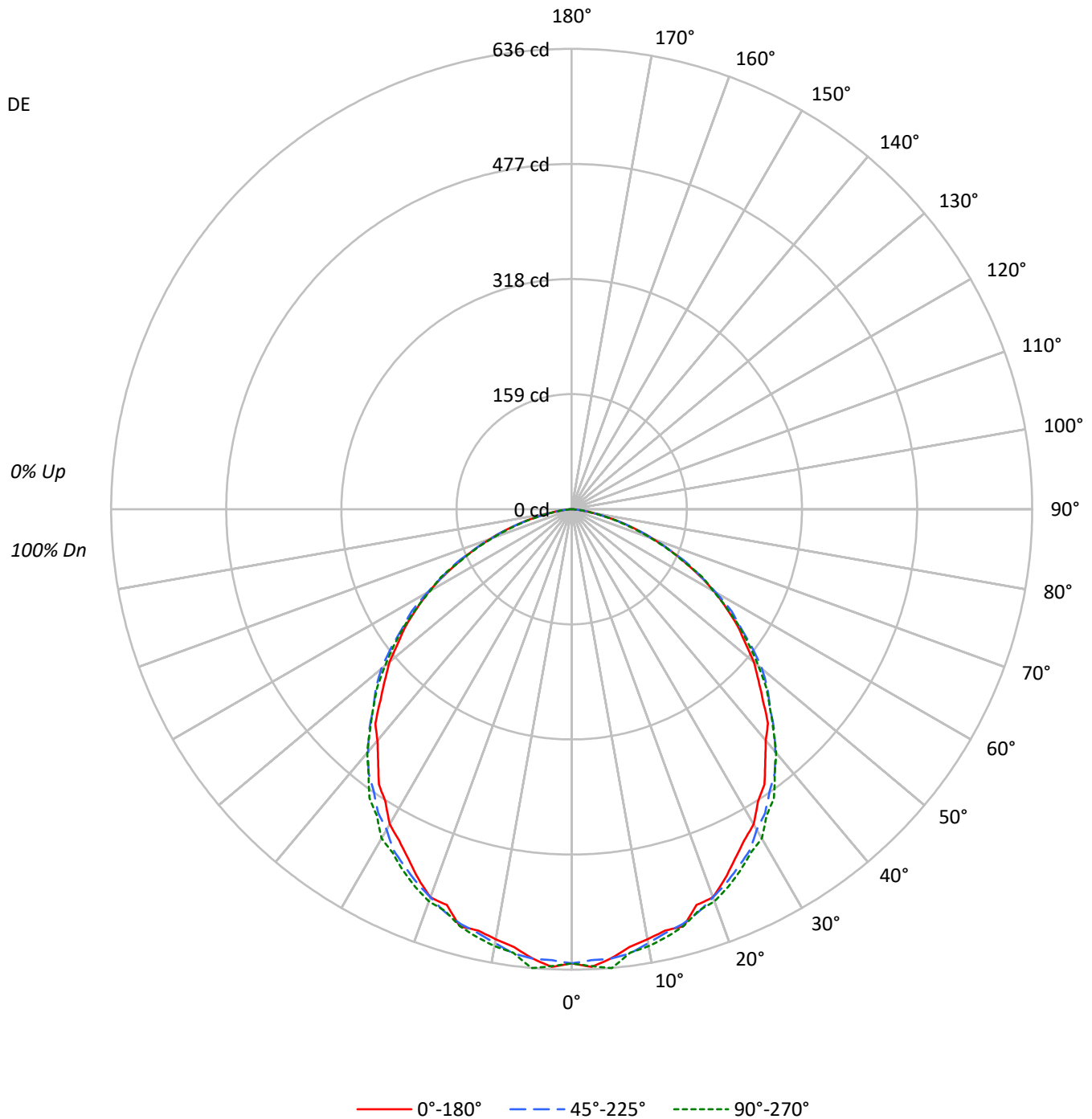
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1688	1688	1688
5°	1682	1683	1719
10°	1648	1663	1674
15°	1662	1652	1662
20°	1633	1633	1651
25°	1583	1618	1635
30°	1561	1589	1631
35°	1525	1564	1600
40°	1465	1536	1543
45°	1421	1472	1474
50°	1374	1436	1409
55°	1309	1335	1325
60°	1224	1237	1215
65°	1092	1119	1084
70°	937	940	913
75°	742	740	711
80°	497	483	465
85°	269	269	250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1509 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.0	3.7
10°-20°	167.2	10.6
20°-30°	250.5	15.8
30°-40°	297.0	18.8
40°-50°	297.5	18.8
50°-60°	252.5	16.0
60°-70°	170.3	10.8
70°-80°	74.8	4.7
80°-90°	12.2	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°	476.8	30.2
0°-40°	773.7	48.9
0°-60°	1323.8	83.7
0°-90°	1581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	623	621	623	621	636	59
15°	596	590	593	596	596	166
25°	533	536	545	552	551	247
35°	464	466	476	487	487	288
45°	373	380	387	397	387	289
55°	279	277	284	283	282	248
65°	172	169	176	169	170	171
75°	71	70	71	66	68	76
85°	9	8	9	8	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	627.3	627.3	627.3	627.3	627.3
2.5°	632.7	627.9	623.5	628.7	631.8
5°	622.8	621.4	623.1	621.2	636.2
7.5°	610.0	615.6	618.9	616.9	617.7
10°	603.2	601.3	608.5	613.5	612.8
12.5°	596.0	598.9	599.3	604.7	605.2
15°	596.4	589.5	593.1	596.2	596.4
17.5°	573.2	580.6	583.2	590.2	581.5
20°	570.4	564.9	570.4	577.6	576.4
22.5°	552.9	546.9	558.5	564.9	564.5
25°	533.2	536.1	544.8	552.0	550.8
27.5°	515.9	519.3	531.7	541.5	535.2
30°	502.5	500.8	511.3	520.1	524.9
32.5°	478.6	484.8	497.1	505.7	501.1
35°	464.1	465.5	476.2	487.3	486.9
37.5°	438.7	445.1	460.3	463.4	460.5
40°	417.1	423.5	437.2	440.5	439.2
42.5°	401.2	402.3	414.0	417.8	411.8
45°	373.4	380.3	386.7	396.6	387.2
47.5°	349.7	353.0	366.6	369.3	364.3
50°	328.3	329.4	343.1	339.8	336.5
52.5°	301.3	306.1	313.8	313.1	309.3
55°	279.1	277.2	284.5	282.6	282.5
57.5°	252.5	255.7	261.7	258.6	253.7
60°	227.5	227.6	229.8	226.3	225.7
62.5°	199.7	200.7	201.2	196.9	203.9
65°	171.5	169.2	175.8	169.1	170.3
67.5°	145.5	146.6	146.0	141.7	143.4
70°	119.1	120.5	119.5	114.7	116.1
72.5°	94.9	93.1	94.3	88.3	91.0
75°	71.4	69.9	71.2	66.2	68.4
77.5°	48.6	49.7	48.9	46.2	47.8
80°	32.1	31.2	31.2	29.6	30.0
82.5°	18.7	17.8	17.6	17.1	17.8
85°	8.7	8.5	8.7	8.4	8.1
87.5°	3.2	3.2	3.2	3.1	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)