

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: P590041

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590041
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-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1648.0 lumens
Efficiency: N/A
Efficacy: 99.3 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

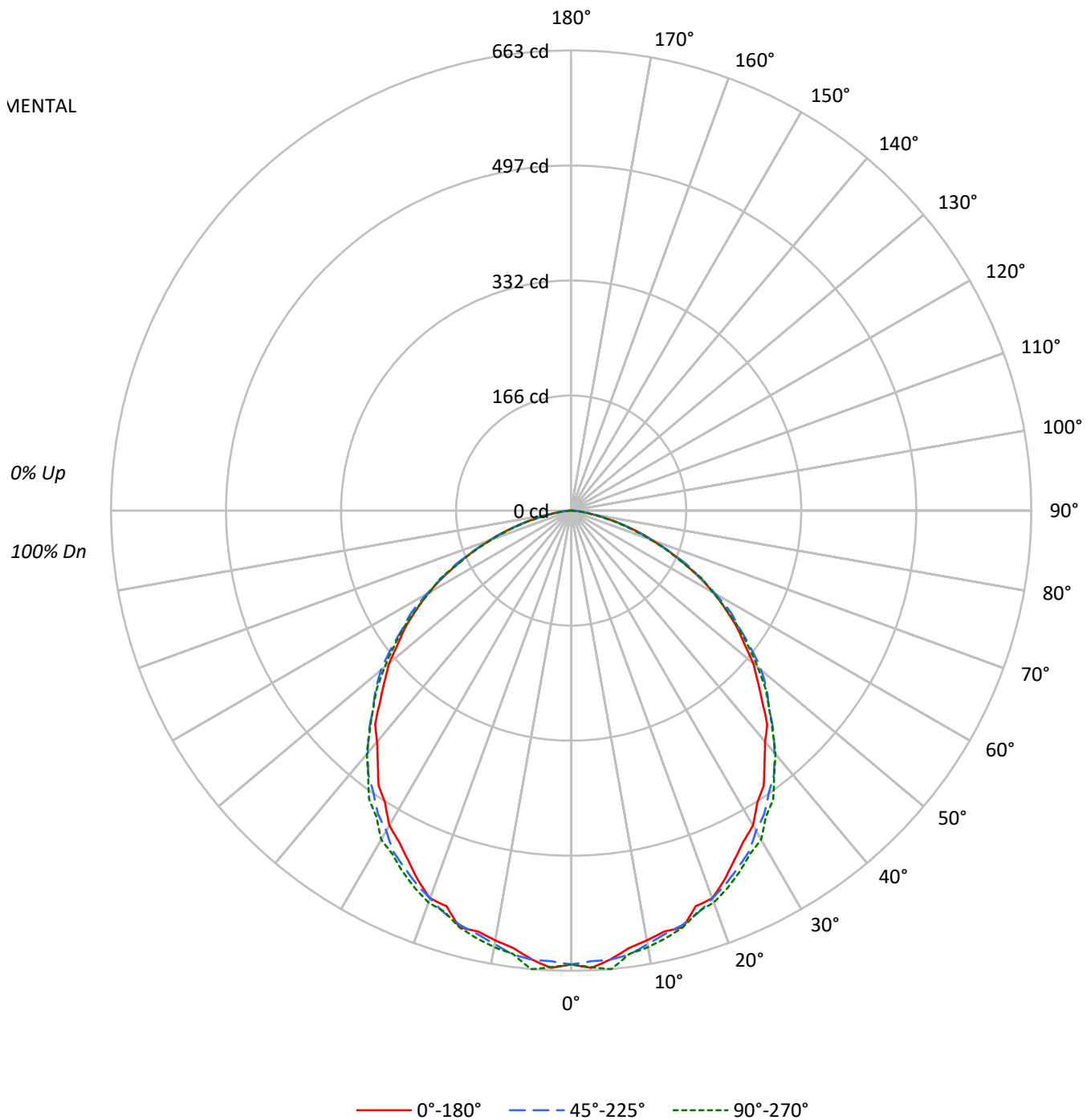
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1760	1760	1760
5°	1754	1754	1791
10°	1718	1733	1746
15°	1732	1723	1732
20°	1702	1702	1721
25°	1650	1686	1705
30°	1628	1656	1700
35°	1589	1631	1668
40°	1527	1601	1608
45°	1481	1534	1536
50°	1433	1497	1469
55°	1365	1392	1382
60°	1277	1289	1266
65°	1138	1167	1130
70°	976	980	953
75°	774	771	741
80°	518	504	483
85°	281	278	259

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	3.7
10°-20°	174.3	10.6
20°-30°	261.2	15.8
30°-40°	309.5	18.8
40°-50°	310.1	18.8
50°-60°	263.2	16.0
60°-70°	177.5	10.8
70°-80°	78.0	4.7
80°-90°	12.7	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°	497.0	30.2
0°-40°	806.5	48.9
0°-60°	1379.9	83.7
0°-90°	1648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	649	648	650	648	663	61
15°	622	614	618	622	622	173
25°	556	559	568	575	574	257
35°	484	485	496	508	508	300
45°	389	396	403	413	404	301
55°	291	289	297	295	294	259
65°	179	176	183	176	178	178
75°	74	73	74	69	71	80
85°	9	9	9	9	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	653.9	653.9	653.9	653.9	653.9
2.5°	659.5	654.6	649.9	655.3	658.6
5°	649.2	647.7	649.5	647.6	663.2
7.5°	635.9	641.7	645.1	643.0	643.9
10°	628.8	626.8	634.3	639.5	638.8
12.5°	621.2	624.3	624.7	630.3	630.8
15°	621.6	614.5	618.3	621.5	621.7
17.5°	597.5	605.3	607.9	615.2	606.1
20°	594.5	588.9	594.5	602.0	600.9
22.5°	576.4	570.0	582.2	588.9	588.5
25°	555.8	558.8	567.9	575.4	574.2
27.5°	537.7	541.3	554.3	564.5	557.9
30°	523.8	522.0	533.0	542.1	547.2
32.5°	498.9	505.3	518.1	527.2	522.3
35°	483.8	485.2	496.4	507.9	507.6
37.5°	457.3	464.0	479.8	483.0	480.1
40°	434.8	441.5	455.7	459.2	457.8
42.5°	418.2	419.3	431.6	435.6	429.2
45°	389.2	396.5	403.1	413.4	403.6
47.5°	364.6	367.9	382.1	384.9	379.8
50°	342.2	343.4	357.6	354.2	350.8
52.5°	314.1	319.0	327.1	326.4	322.4
55°	290.9	289.0	296.6	294.6	294.5
57.5°	263.2	266.5	272.8	269.6	264.4
60°	237.2	237.2	239.5	235.9	235.2
62.5°	208.2	209.2	209.7	205.2	212.5
65°	178.7	176.4	183.3	176.3	177.5
67.5°	151.6	152.8	152.1	147.7	149.4
70°	124.1	125.6	124.5	119.5	121.1
72.5°	98.9	97.1	98.3	92.0	94.9
75°	74.4	72.9	74.2	69.0	71.3
77.5°	50.7	51.8	51.0	48.2	49.8
80°	33.4	32.5	32.5	30.9	31.2
82.5°	19.5	18.6	18.3	17.8	18.6
85°	9.1	8.9	9.0	8.8	8.4
87.5°	3.3	3.4	3.4	3.2	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)