

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: P590622

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590622
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-LD4-3STD-35-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5451.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

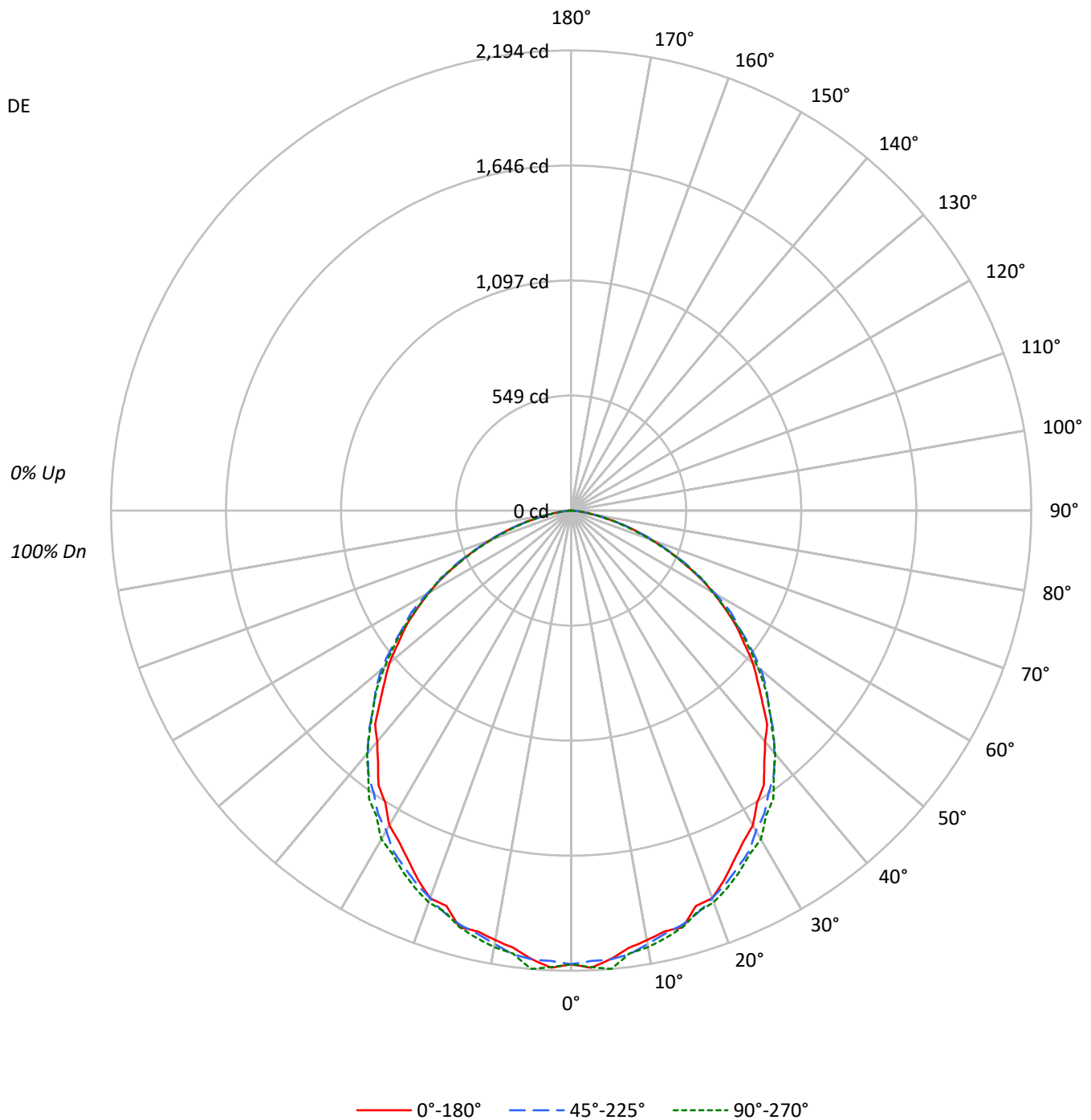
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	5820	5820	5820
5°	5801	5803	5925
10°	5683	5733	5773
15°	5728	5697	5729
20°	5631	5631	5691
25°	5458	5578	5639
30°	5383	5478	5624
35°	5256	5394	5515
40°	5052	5295	5319
45°	4899	5074	5081
50°	4738	4952	4858
55°	4515	4602	4570
60°	4222	4264	4187
65°	3764	3861	3738
70°	3230	3241	3150
75°	2558	2552	2454
80°	1714	1666	1601
85°	932	923	861

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5204 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.4	3.7
10°-20°	576.6	10.6
20°-30°	863.9	15.8
30°-40°	1023.8	18.8
40°-50°	1025.7	18.8
50°-60°	870.7	16.0
60°-70°	587.0	10.8
70°-80°	258.0	4.7
80°-90°	41.9	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°	1643.9	30.2
0°-40°	2667.7	48.9
0°-60°	4564.1	83.7
0°-90°	5451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5451.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2163	2163	2163	2163	2163	
5°	2148	2142	2148	2142	2194	202
15°	2056	2032	2045	2056	2056	573
25°	1838	1848	1878	1903	1899	850
35°	1600	1605	1642	1680	1679	993
45°	1287	1311	1333	1368	1335	996
55°	962	956	981	974	974	856
65°	591	583	606	583	587	588
75°	246	241	246	228	236	264
85°	30	29	30	29	28	44
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2162.8	2162.8	2162.8	2162.8	2162.8
2.5°	2181.5	2165.1	2149.7	2167.6	2178.5
5°	2147.5	2142.4	2148.3	2141.9	2193.5
7.5°	2103.3	2122.6	2133.8	2126.8	2129.9
10°	2079.9	2073.2	2098.0	2115.3	2112.8
12.5°	2054.7	2064.8	2066.2	2084.9	2086.6
15°	2056.1	2032.4	2045.0	2055.6	2056.4
17.5°	1976.3	2002.0	2010.6	2034.9	2004.8
20°	1966.5	1947.8	1966.5	1991.4	1987.4
22.5°	1906.5	1885.5	1925.7	1947.8	1946.4
25°	1838.3	1848.4	1878.5	1903.1	1899.2
27.5°	1778.6	1790.3	1833.3	1867.1	1845.3
30°	1732.5	1726.6	1762.9	1793.1	1809.8
32.5°	1650.1	1671.3	1713.8	1743.7	1727.7
35°	1600.1	1604.9	1642.0	1680.0	1678.9
37.5°	1512.7	1534.8	1587.0	1597.6	1587.8
40°	1438.2	1460.2	1507.4	1518.9	1514.1
42.5°	1383.1	1387.1	1427.5	1440.7	1419.7
45°	1287.4	1311.4	1333.2	1367.5	1335.1
47.5°	1205.8	1217.0	1263.9	1273.1	1256.1
50°	1131.8	1135.7	1182.9	1171.5	1160.3
52.5°	1038.8	1055.3	1081.8	1079.6	1066.5
55°	962.3	955.9	981.0	974.3	974.0
57.5°	870.4	881.6	902.3	891.7	874.6
60°	784.4	784.7	792.2	780.2	778.0
62.5°	688.6	692.0	693.7	678.9	702.9
65°	591.2	583.4	606.3	583.1	587.0
67.5°	501.5	505.4	503.2	488.7	494.3
70°	410.5	415.5	411.9	395.4	400.4
72.5°	327.3	321.1	325.1	304.4	313.9
75°	246.0	241.0	245.5	228.2	236.0
77.5°	167.6	171.5	168.7	159.5	164.8
80°	110.6	107.5	107.5	102.2	103.3
82.5°	64.5	61.4	60.6	58.9	61.4
85°	30.2	29.3	29.9	29.0	27.9
87.5°	10.9	11.2	11.2	10.6	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)