

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: P590890

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590890
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-LD4-4LO-50-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5580.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

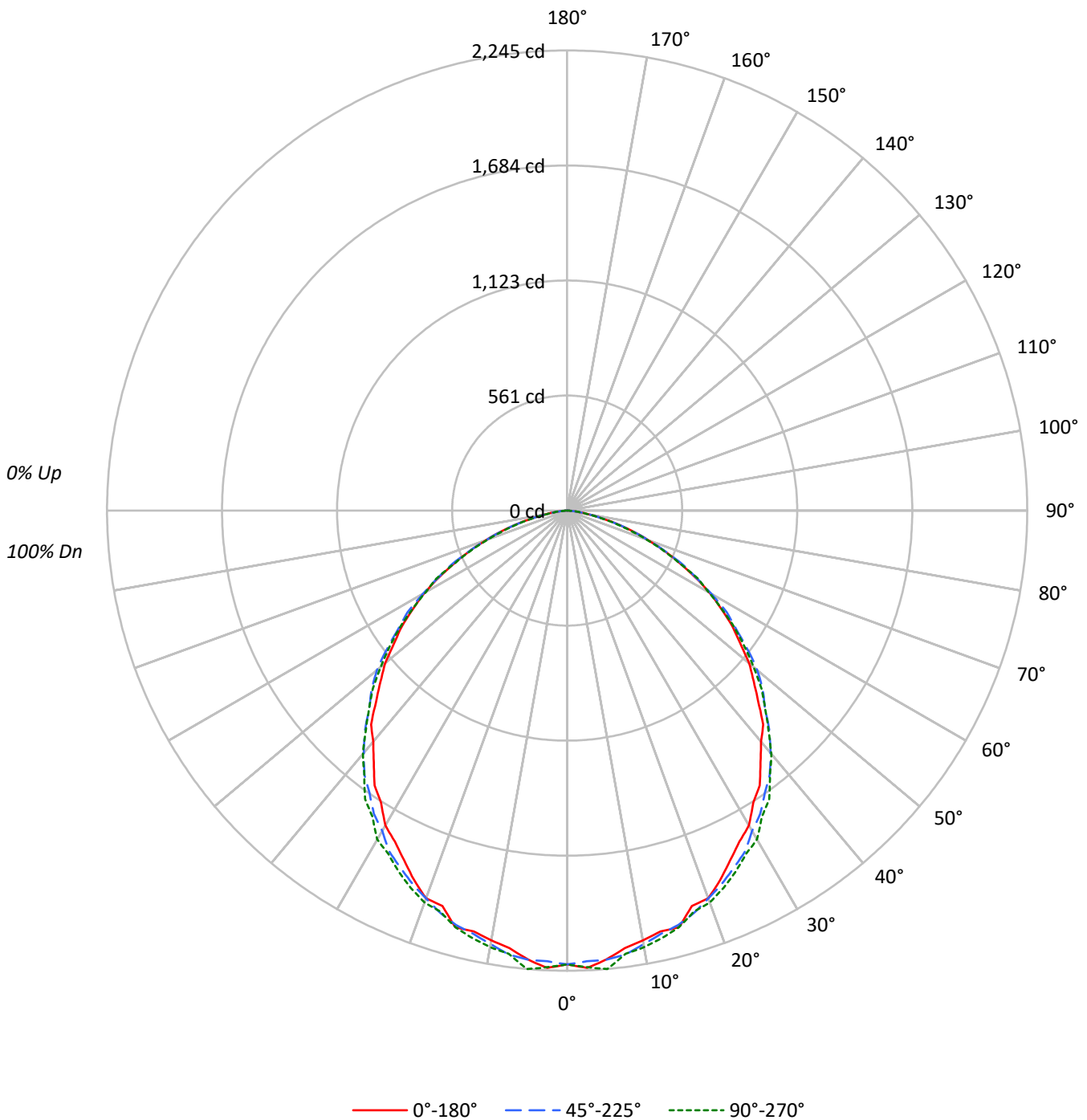
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5958	5958	5958
5°	5938	5940	6065
10°	5818	5869	5910
15°	5864	5832	5865
20°	5765	5765	5826
25°	5587	5710	5772
30°	5511	5607	5757
35°	5381	5522	5646
40°	5172	5421	5445
45°	5015	5194	5201
50°	4850	5069	4973
55°	4622	4711	4678
60°	4322	4365	4286
65°	3854	3952	3826
70°	3306	3317	3225
75°	2618	2613	2512
80°	1754	1706	1640
85°	954	945	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5327 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.3	3.7
10°-20°	590.2	10.6
20°-30°	884.3	15.8
30°-40°	1048.1	18.8
40°-50°	1050.0	18.8
50°-60°	891.3	16.0
60°-70°	600.9	10.8
70°-80°	264.0	4.7
80°-90°	42.9	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°	1682.8	30.2
0°-40°	2730.9	48.9
0°-60°	4672.2	83.7
0°-90°	5580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5580.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2214	2214	2214	2214	2214	
5°	2198	2193	2199	2193	2245	207
15°	2105	2080	2093	2104	2105	586
25°	1882	1892	1923	1948	1944	870
35°	1638	1643	1681	1720	1719	1017
45°	1318	1342	1365	1400	1367	1019
55°	985	978	1004	997	997	876
65°	605	597	621	597	601	602
75°	252	247	251	234	242	270
85°	31	30	31	30	29	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2214.0	2214.0	2214.0	2214.0	2214.0
2.5°	2233.2	2216.3	2200.6	2218.9	2230.0
5°	2198.3	2193.1	2199.1	2192.6	2245.4
7.5°	2153.1	2172.8	2184.3	2177.1	2180.3
10°	2129.1	2122.2	2147.7	2165.4	2162.8
12.5°	2103.4	2113.7	2115.1	2134.2	2136.0
15°	2104.8	2080.5	2093.4	2104.2	2105.1
17.5°	2023.0	2049.3	2058.2	2083.1	2052.2
20°	2013.0	1993.9	2013.0	2038.5	2034.5
22.5°	1951.6	1930.1	1971.3	1993.9	1992.5
25°	1881.8	1892.1	1923.0	1948.2	1944.1
27.5°	1820.7	1832.7	1876.7	1911.3	1889.0
30°	1773.5	1767.5	1804.6	1835.5	1852.7
32.5°	1689.2	1710.9	1754.3	1784.9	1768.6
35°	1638.0	1642.9	1680.9	1719.7	1718.6
37.5°	1548.5	1571.1	1624.6	1635.4	1625.4
40°	1472.2	1494.8	1543.1	1554.8	1549.9
42.5°	1415.9	1419.9	1461.3	1474.8	1453.3
45°	1317.8	1342.4	1364.7	1399.9	1366.7
47.5°	1234.4	1245.8	1293.8	1303.2	1285.8
50°	1158.6	1162.6	1210.9	1199.2	1187.8
52.5°	1063.4	1080.3	1107.4	1105.1	1091.7
55°	985.1	978.5	1004.2	997.4	997.1
57.5°	891.0	902.5	923.6	912.8	895.3
60°	803.0	803.3	811.0	798.7	796.4
62.5°	704.9	708.4	710.1	694.9	719.5
65°	605.2	597.2	620.6	596.9	600.9
67.5°	513.4	517.4	515.1	500.3	506.0
70°	420.2	425.4	421.6	404.8	409.9
72.5°	335.0	328.7	332.7	311.6	321.3
75°	251.8	246.7	251.3	233.5	241.6
77.5°	171.5	175.5	172.7	163.2	168.7
80°	113.2	110.1	110.1	104.6	105.8
82.5°	66.0	62.9	62.0	60.3	62.9
85°	30.9	30.0	30.6	29.7	28.6
87.5°	11.1	11.4	11.4	10.9	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)