

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: P590836

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590836
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-35-UNV-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5581.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

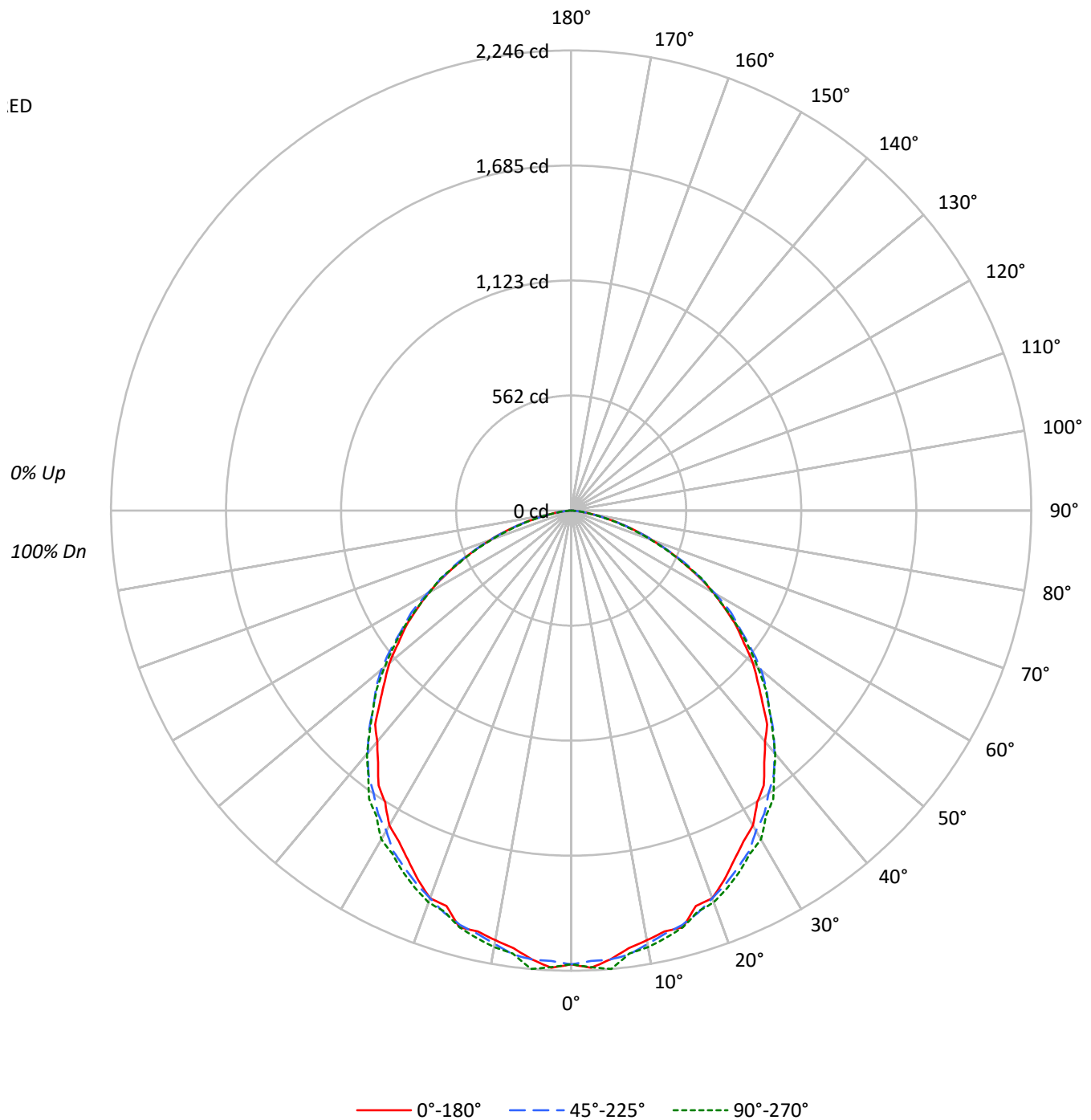
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5959	5959	5959
5°	5939	5941	6067
10°	5819	5870	5911
15°	5865	5833	5866
20°	5766	5766	5827
25°	5589	5711	5774
30°	5512	5609	5758
35°	5382	5523	5647
40°	5173	5422	5446
45°	5016	5195	5202
50°	4851	5070	4973
55°	4623	4712	4679
60°	4322	4365	4287
65°	3854	3952	3827
70°	3307	3318	3226
75°	2619	2613	2512
80°	1754	1706	1640
85°	954	945	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5328 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.3	3.7
10°-20°	590.3	10.6
20°-30°	884.5	15.8
30°-40°	1048.3	18.8
40°-50°	1050.2	18.8
50°-60°	891.4	16.0
60°-70°	601.0	10.8
70°-80°	264.1	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°	1683.1	30.2
0°-40°	2731.3	48.9
0°-60°	4673.0	83.7
0°-90°	5581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2214	2214	2214	2214	2214	
5°	2199	2194	2200	2193	2246	207
15°	2105	2081	2094	2105	2106	587
25°	1882	1892	1923	1948	1944	870
35°	1638	1643	1681	1720	1719	1017
45°	1318	1343	1365	1400	1367	1020
55°	985	979	1004	998	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°	2214.4	2214.4	2214.4	2214.4	2214.4
2.5°	2233.6	2216.7	2201.0	2219.3	2230.4
5°	2198.7	2193.5	2199.5	2193.0	2245.9
7.5°	2153.5	2173.2	2184.7	2177.5	2180.7
10°	2129.5	2122.6	2148.1	2165.8	2163.2
12.5°	2103.8	2114.0	2115.5	2134.6	2136.3
15°	2105.2	2080.9	2093.7	2104.6	2105.5
17.5°	2023.4	2049.7	2058.6	2083.5	2052.6
20°	2013.4	1994.2	2013.4	2038.8	2034.8
22.5°	1951.9	1930.5	1971.7	1994.2	1992.8
25°	1882.2	1892.5	1923.3	1948.5	1944.5
27.5°	1821.0	1833.0	1877.0	1911.6	1889.3
30°	1773.8	1767.8	1805.0	1835.9	1853.0
32.5°	1689.5	1711.2	1754.7	1785.2	1768.9
35°	1638.3	1643.1	1681.2	1720.1	1718.9
37.5°	1548.8	1571.4	1624.8	1635.7	1625.7
40°	1472.5	1495.0	1543.4	1555.1	1550.2
42.5°	1416.1	1420.1	1461.6	1475.0	1453.6
45°	1318.1	1342.6	1365.0	1400.1	1367.0
47.5°	1234.6	1246.0	1294.0	1303.5	1286.0
50°	1158.8	1162.8	1211.1	1199.4	1188.0
52.5°	1063.6	1080.5	1107.6	1105.3	1091.9
55°	985.3	978.7	1004.4	997.6	997.3
57.5°	891.2	902.6	923.8	912.9	895.5
60°	803.1	803.4	811.1	798.8	796.6
62.5°	705.1	708.5	710.2	695.1	719.6
65°	605.3	597.3	620.7	597.0	601.0
67.5°	513.5	517.5	515.2	500.3	506.1
70°	420.3	425.4	421.7	404.9	410.0
72.5°	335.1	328.8	332.8	311.6	321.4
75°	251.9	246.7	251.3	233.6	241.6
77.5°	171.5	175.6	172.7	163.3	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°	11.2	11.4	11.4	10.9	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)