

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: P590826

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590826
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5433.0 lumens
Efficiency: N/A
Efficacy: 116.1 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

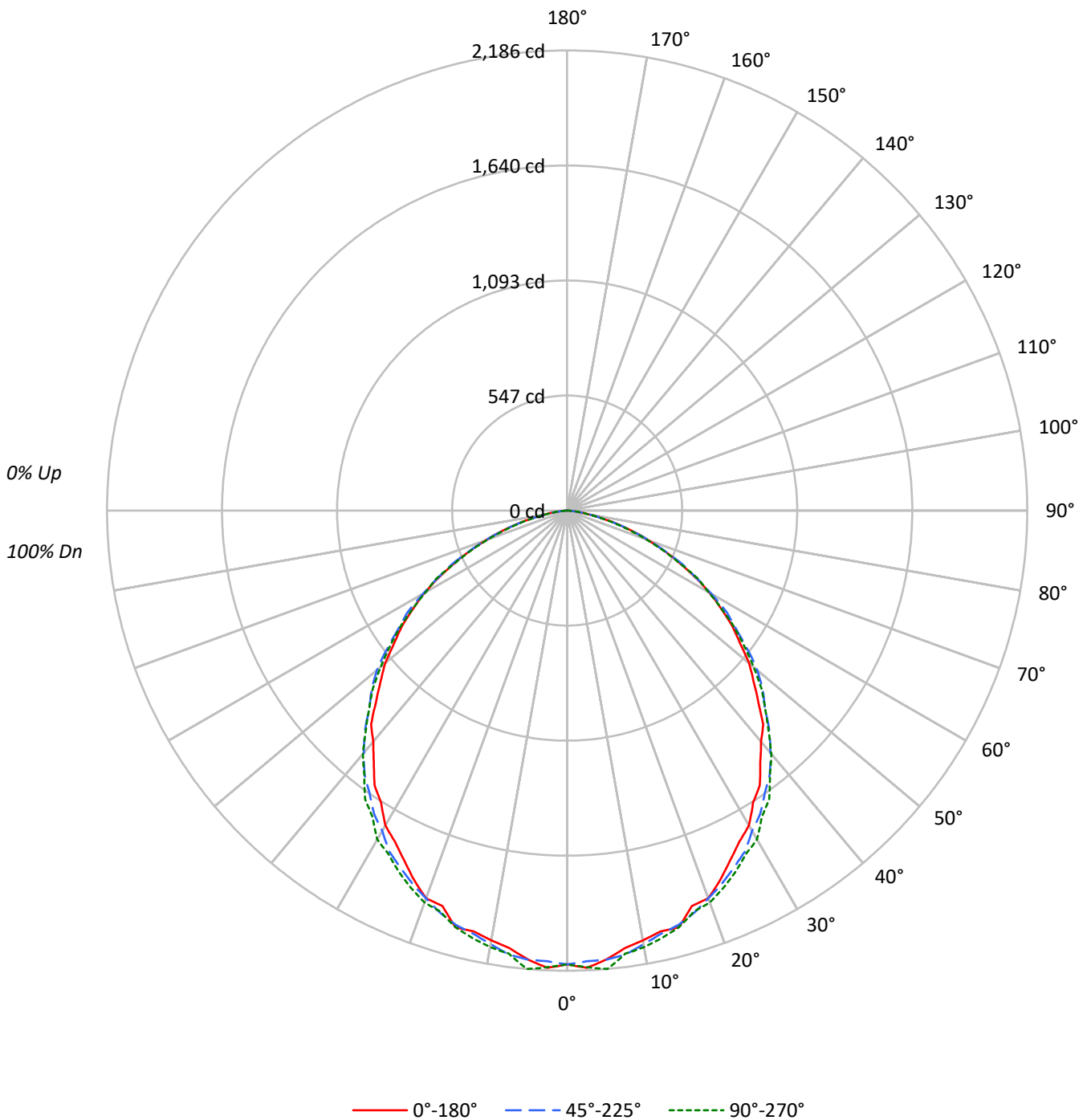
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	5801	5801	5801
5°	5782	5784	5906
10°	5664	5714	5754
15°	5709	5678	5710
20°	5613	5613	5673
25°	5440	5559	5620
30°	5366	5460	5605
35°	5239	5376	5497
40°	5035	5278	5301
45°	4883	5057	5064
50°	4723	4936	4842
55°	4500	4587	4555
60°	4208	4250	4173
65°	3752	3848	3726
70°	3219	3230	3140
75°	2549	2544	2445
80°	1708	1661	1596
85°	929	920	858

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5187 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	3.7
10°-20°	574.7	10.6
20°-30°	861.0	15.8
30°-40°	1020.5	18.8
40°-50°	1022.3	18.8
50°-60°	867.8	16.0
60°-70°	585.1	10.8
70°-80°	257.1	4.7
80°-90°	41.8	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°	1638.5	30.2
0°-40°	2658.9	48.9
0°-60°	4549.1	83.7
0°-90°	5433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2156	2156	2156	2156	2156	
5°	2140	2135	2141	2135	2186	202
15°	2049	2026	2038	2049	2050	571
25°	1832	1842	1872	1897	1893	847
35°	1595	1600	1637	1674	1673	990
45°	1283	1307	1329	1363	1331	993
55°	959	953	978	971	971	853
65°	589	581	604	581	585	586
75°	245	240	245	227	235	263
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°	2155.7	2155.7	2155.7	2155.7	2155.7
2.5°	2174.3	2157.9	2142.6	2160.4	2171.3
5°	2140.4	2135.4	2141.2	2134.8	2186.3
7.5°	2096.4	2115.6	2126.7	2119.8	2122.8
10°	2073.0	2066.3	2091.1	2108.4	2105.9
12.5°	2048.0	2058.0	2059.4	2078.0	2079.7
15°	2049.4	2025.7	2038.2	2048.8	2049.6
17.5°	1969.8	1995.4	2004.0	2028.2	1998.1
20°	1960.0	1941.4	1960.0	1984.8	1980.9
22.5°	1900.2	1879.3	1919.4	1941.4	1940.0
25°	1832.3	1842.3	1872.3	1896.8	1892.9
27.5°	1772.7	1784.4	1827.2	1860.9	1839.2
30°	1726.8	1720.9	1757.1	1787.2	1803.9
32.5°	1644.7	1665.8	1708.1	1737.9	1722.0
35°	1594.8	1599.6	1636.6	1674.4	1673.3
37.5°	1507.7	1529.7	1581.8	1592.3	1582.6
40°	1433.4	1455.4	1502.4	1513.8	1509.1
42.5°	1378.6	1382.5	1422.8	1435.9	1415.0
45°	1283.1	1307.0	1328.8	1363.0	1330.7
47.5°	1201.8	1213.0	1259.7	1268.9	1251.9
50°	1128.1	1132.0	1179.0	1167.6	1156.5
52.5°	1035.4	1051.8	1078.3	1076.0	1062.9
55°	959.1	952.7	977.8	971.1	970.8
57.5°	867.6	878.7	899.3	888.7	871.7
60°	781.8	782.1	789.6	777.7	775.4
62.5°	686.4	689.7	691.4	676.6	700.6
65°	589.2	581.4	604.3	581.2	585.1
67.5°	499.9	503.8	501.6	487.1	492.6
70°	409.1	414.2	410.5	394.1	399.1
72.5°	326.2	320.1	324.0	303.4	312.8
75°	245.2	240.2	244.7	227.4	235.2
77.5°	167.0	170.9	168.1	158.9	164.2
80°	110.2	107.2	107.2	101.9	103.0
82.5°	64.3	61.2	60.4	58.7	61.2
85°	30.1	29.2	29.8	28.9	27.8
87.5°	10.9	11.1	11.1	10.6	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)