

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: P590861

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590861
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-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5898.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

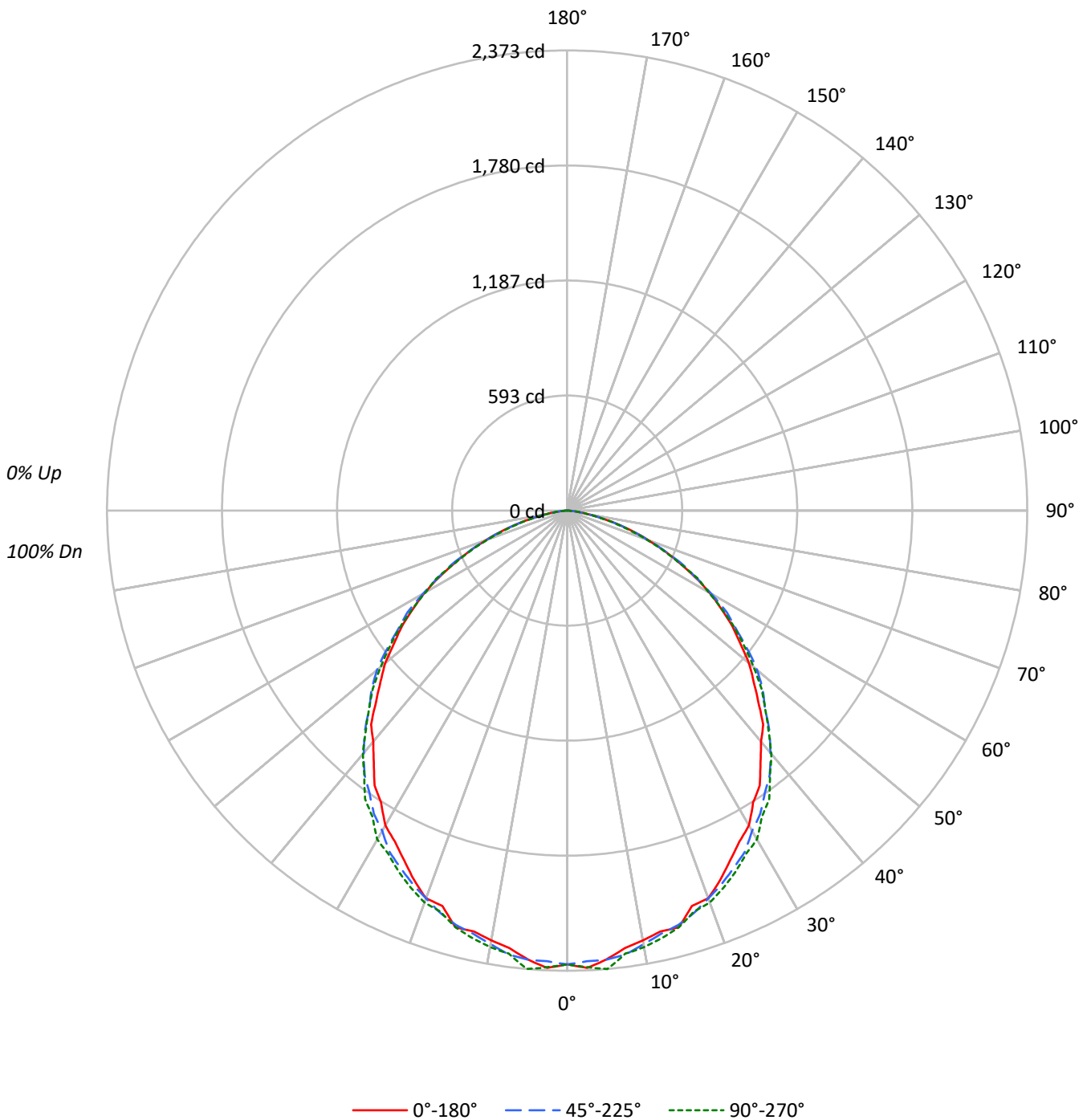
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6297	6297	6297
5°	6277	6279	6411
10°	6149	6203	6247
15°	6198	6164	6199
20°	6093	6093	6158
25°	5906	6035	6101
30°	5825	5927	6085
35°	5687	5837	5967
40°	5466	5729	5755
45°	5301	5490	5498
50°	5127	5358	5256
55°	4885	4980	4944
60°	4568	4613	4531
65°	4073	4177	4044
70°	3495	3507	3409
75°	2768	2761	2654
80°	1855	1802	1733
85°	1007	997	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5631 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.1	3.7
10°-20°	623.9	10.6
20°-30°	934.7	15.8
30°-40°	1107.8	18.8
40°-50°	1109.8	18.8
50°-60°	942.1	16.0
60°-70°	635.1	10.8
70°-80°	279.1	4.7
80°-90°	45.4	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°	1778.7	30.2
0°-40°	2886.5	48.9
0°-60°	4938.4	83.7
0°-90°	5898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2340	2340	2340	2340	2340	
5°	2324	2318	2324	2318	2373	219
15°	2225	2199	2213	2224	2225	620
25°	1989	2000	2033	2059	2055	920
35°	1731	1736	1777	1818	1816	1075
45°	1393	1419	1442	1480	1445	1078
55°	1041	1034	1062	1054	1054	926
65°	640	631	656	631	635	636
75°	266	261	266	247	255	285
85°	33	32	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2340.2	2340.2	2340.2	2340.2	2340.2
2.5°	2360.4	2342.6	2326.0	2345.3	2357.1
5°	2323.6	2318.1	2324.5	2317.5	2373.4
7.5°	2275.8	2296.7	2308.8	2301.2	2304.5
10°	2250.4	2243.2	2270.1	2288.8	2286.1
12.5°	2223.2	2234.1	2235.6	2255.9	2257.7
15°	2224.8	2199.1	2212.7	2224.2	2225.1
17.5°	2138.3	2166.1	2175.5	2201.8	2169.2
20°	2127.8	2107.5	2127.8	2154.7	2150.4
22.5°	2062.8	2040.1	2083.6	2107.5	2106.0
25°	1989.1	2000.0	2032.6	2059.2	2054.9
27.5°	1924.4	1937.1	1983.6	2020.2	1996.6
30°	1874.6	1868.2	1907.5	1940.1	1958.3
32.5°	1785.4	1808.4	1854.3	1886.6	1869.4
35°	1731.3	1736.5	1776.7	1817.8	1816.5
37.5°	1636.8	1660.6	1717.1	1728.6	1718.0
40°	1556.1	1580.0	1631.0	1643.4	1638.3
42.5°	1496.6	1500.8	1544.6	1558.8	1536.1
45°	1392.9	1418.9	1442.5	1479.6	1444.6
47.5°	1304.7	1316.8	1367.5	1377.5	1359.1
50°	1224.6	1228.9	1279.9	1267.5	1255.4
52.5°	1124.0	1141.8	1170.5	1168.1	1153.9
55°	1041.2	1034.3	1061.5	1054.2	1053.9
57.5°	941.8	953.9	976.3	964.8	946.3
60°	848.7	849.1	857.2	844.2	841.8
62.5°	745.1	748.7	750.5	734.5	760.5
65°	639.7	631.2	656.0	630.9	635.1
67.5°	542.7	546.9	544.5	528.8	534.8
70°	444.2	449.6	445.7	427.8	433.3
72.5°	354.1	347.5	351.7	329.3	339.6
75°	266.2	260.8	265.6	246.9	255.3
77.5°	181.3	185.5	182.5	172.5	178.3
80°	119.7	116.3	116.3	110.6	111.8
82.5°	69.8	66.5	65.6	63.8	66.5
85°	32.6	31.7	32.3	31.4	30.2
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)