

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: P590842

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590842
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-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

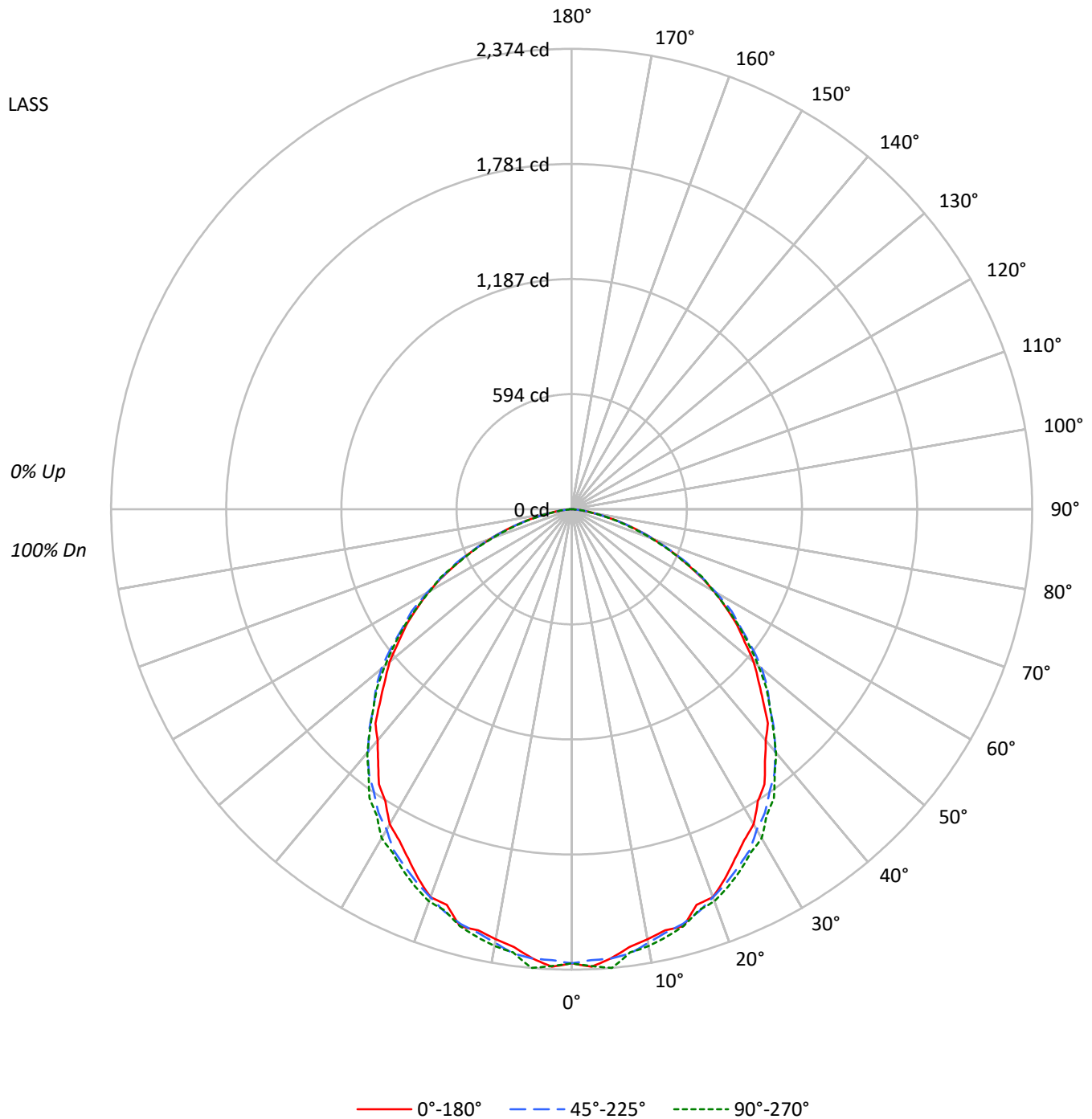
Lumens per Lamp: N/A
Luminaire Lumens: 5900.0 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	6300	6300	6300
5°	6279	6281	6413
10°	6151	6205	6249
15°	6200	6166	6201
20°	6095	6095	6160
25°	5908	6037	6103
30°	5827	5929	6087
35°	5689	5839	5970
40°	5468	5732	5757
45°	5303	5492	5499
50°	5128	5360	5258
55°	4887	4982	4946
60°	4569	4615	4532
65°	4074	4178	4045
70°	3496	3508	3410
75°	2769	2763	2655
80°	1855	1804	1733
85°	1007	997	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5633 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.2	3.7
10°-20°	624.1	10.6
20°-30°	935.0	15.8
30°-40°	1108.2	18.8
40°-50°	1110.2	18.8
50°-60°	942.4	16.0
60°-70°	635.4	10.8
70°-80°	279.2	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°	1779.3	30.2
0°-40°	2887.5	48.9
0°-60°	4940.1	83.7
0°-90°	5900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2341	2341	2341	2341	2341	
5°	2324	2319	2325	2318	2374	219
15°	2226	2200	2213	2225	2226	620
25°	1990	2001	2033	2060	2056	920
35°	1732	1737	1777	1818	1817	1075
45°	1393	1419	1443	1480	1445	1078
55°	1042	1035	1062	1055	1054	927
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°	2341.0	2341.0	2341.0	2341.0	2341.0
2.5°	2361.2	2343.4	2326.8	2346.1	2357.9
5°	2324.3	2318.9	2325.3	2318.3	2374.2
7.5°	2276.6	2297.4	2309.5	2302.0	2305.3
10°	2251.2	2243.9	2270.8	2289.6	2286.9
12.5°	2224.0	2234.9	2236.4	2256.6	2258.5
15°	2225.5	2199.8	2213.4	2224.9	2225.8
17.5°	2139.1	2166.9	2176.2	2202.5	2169.9
20°	2128.5	2108.2	2128.5	2155.4	2151.2
22.5°	2063.5	2040.8	2084.4	2108.2	2106.7
25°	1989.7	2000.6	2033.3	2059.9	2055.6
27.5°	1925.1	1937.8	1984.3	2020.9	1997.3
30°	1875.2	1868.8	1908.1	1940.8	1958.9
32.5°	1786.0	1809.0	1854.9	1887.3	1870.1
35°	1731.9	1737.1	1777.3	1818.4	1817.2
37.5°	1637.3	1661.2	1717.7	1729.2	1718.6
40°	1556.6	1580.5	1631.6	1644.0	1638.8
42.5°	1497.1	1501.3	1545.1	1559.3	1536.7
45°	1393.4	1419.4	1443.0	1480.1	1445.1
47.5°	1305.1	1317.2	1368.0	1378.0	1359.5
50°	1225.0	1229.3	1280.4	1268.0	1255.9
52.5°	1124.4	1142.2	1170.9	1168.5	1154.3
55°	1041.6	1034.6	1061.8	1054.6	1054.3
57.5°	942.1	954.2	976.6	965.1	946.7
60°	849.0	849.3	857.5	844.5	842.1
62.5°	745.4	749.0	750.8	734.8	760.8
65°	639.9	631.4	656.2	631.1	635.3
67.5°	542.9	547.1	544.7	528.9	535.0
70°	444.3	449.8	445.8	428.0	433.4
72.5°	354.2	347.6	351.8	329.5	339.7
75°	266.3	260.8	265.7	246.9	255.4
77.5°	181.4	185.6	182.6	172.6	178.3
80°	119.7	116.4	116.4	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)