

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: P562746

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562746
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-40-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4957.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

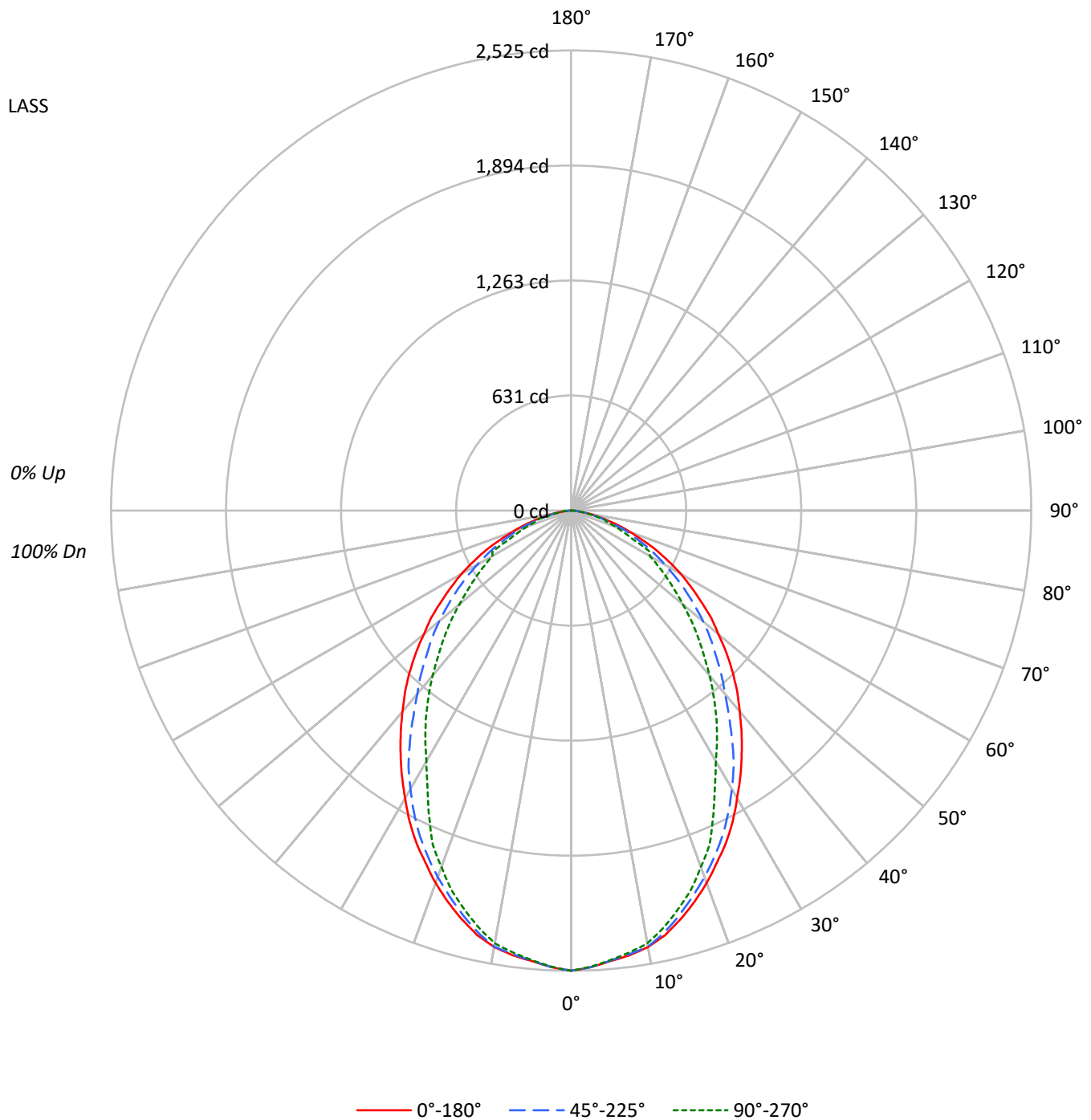
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3397	3397	3397
5°	3351	3347	3343
10°	3322	3318	3294
15°	3233	3200	3155
20°	3114	3064	2980
25°	2986	2921	2739
30°	2830	2739	2467
35°	2680	2532	2282
40°	2528	2307	2076
45°	2383	2133	1878
50°	2206	1980	1674
55°	2041	1794	1500
60°	1869	1602	1343
65°	1645	1403	1189
70°	1355	1229	1011
75°	1078	941	986
80°	724	679	633
85°	451	540	631

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2383 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.0	4.7
10°-20°	645.1	13.0
20°-30°	893.1	18.0
30°-40°	952.2	19.2
40°-50°	868.7	17.5
50°-60°	680.6	13.7
60°-70°	443.6	8.9
70°-80°	196.5	4.0
80°-90°	42.2	0.9
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°	1773.2	35.8
0°-40°	2725.4	55.0
0°-60°	4274.7	86.2
0°-90°	4957.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4957.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2525	2525	2525	2525	2525	
5°	2481	2478	2478	2475	2475	236
15°	2321	2321	2297	2274	2265	652
25°	2011	2000	1968	1897	1845	923
35°	1632	1620	1541	1424	1390	1020
45°	1252	1226	1121	1028	987	965
55°	870	844	765	674	639	780
65°	517	488	441	450	374	509
75°	207	193	181	172	190	222
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2525.0	2525.0	2525.0	2525.0	2525.0
2.5°	2507.5	2507.5	2507.5	2504.6	2504.6
5°	2481.2	2478.3	2478.3	2475.4	2475.4
7.5°	2460.8	2457.9	2455.0	2452.1	2446.2
10°	2431.6	2431.6	2428.7	2414.1	2411.2
12.5°	2384.9	2382.0	2370.3	2349.9	2344.0
15°	2320.7	2320.7	2297.3	2274.0	2265.2
17.5°	2250.6	2247.7	2218.5	2195.2	2183.5
20°	2174.7	2168.9	2139.7	2101.8	2081.3
22.5°	2090.1	2090.1	2055.1	2005.4	1985.0
25°	2011.3	1999.6	1967.5	1897.4	1844.9
27.5°	1920.8	1903.3	1868.2	1769.0	1707.7
30°	1821.5	1812.8	1763.1	1634.7	1588.0
32.5°	1728.1	1713.5	1661.0	1526.7	1488.7
35°	1631.8	1620.1	1541.3	1424.5	1389.5
37.5°	1535.5	1520.9	1421.6	1328.2	1284.4
40°	1439.1	1421.6	1313.6	1228.9	1182.2
42.5°	1348.6	1325.3	1220.2	1129.7	1077.2
45°	1252.3	1226.0	1120.9	1027.5	986.7
47.5°	1156.0	1132.6	1036.3	940.0	893.2
50°	1053.8	1033.4	945.8	849.5	799.8
52.5°	969.1	937.0	852.4	756.0	715.2
55°	869.9	843.6	764.8	674.3	639.3
57.5°	779.4	753.1	680.2	595.5	566.3
60°	694.7	656.8	595.5	522.5	499.2
62.5°	601.3	572.1	519.6	458.3	487.5
65°	516.7	487.5	440.8	449.5	373.6
67.5°	423.3	408.7	367.8	326.9	315.3
70°	344.5	326.9	312.3	268.6	256.9
72.5°	274.4	256.9	236.4	213.1	204.3
75°	207.3	192.7	181.0	172.2	189.7
77.5°	143.0	137.2	128.4	119.7	116.8
80°	93.4	90.5	87.6	84.7	81.7
82.5°	55.5	55.5	55.5	55.5	55.5
85°	29.2	32.1	35.0	37.9	40.9
87.5°	17.5	17.5	20.4	23.4	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)