

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: P561531

Luminaire Tested: FSR-12-4-LD4-2LO-35-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561531
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-12-4-LD4-2LO-35-UNV-80-94-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4972.0 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

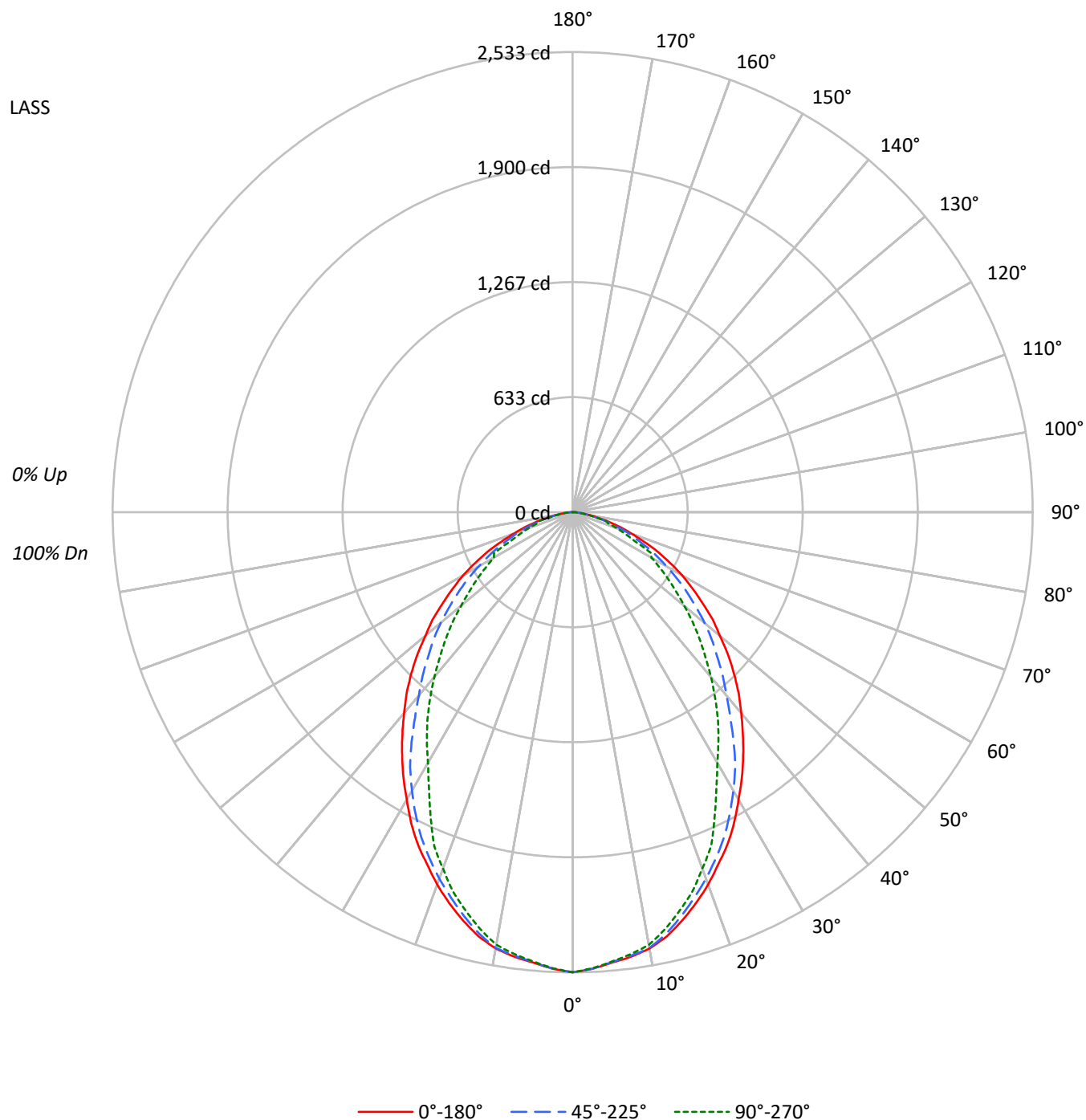
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		92
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		74
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		67
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		51
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		48
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		44
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6815	6815	6815
5°	6723	6715	6707
10°	6665	6656	6609
15°	6485	6420	6330
20°	6247	6146	5978
25°	5990	5859	5494
30°	5677	5495	4949
35°	5377	5079	4578
40°	5071	4628	4166
45°	4780	4279	3766
50°	4425	3972	3359
55°	4093	3599	3008
60°	3751	3215	2695
65°	3300	2815	2387
70°	2718	2465	2028
75°	2162	1887	1979
80°	1452	1361	1271
85°	905	1084	1266

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4780 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.8	4.7
10°-20°	647.0	13.0
20°-30°	895.8	18.0
30°-40°	955.1	19.2
40°-50°	871.4	17.5
50°-60°	682.6	13.7
60°-70°	444.9	8.9
70°-80°	197.1	4.0
80°-90°	42.3	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°	1778.5	35.8
0°-40°	2733.7	55.0
0°-60°	4287.7	86.2
0°-90°	4972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2533	2533	2533	2533	2533	
5°	2489	2486	2486	2483	2483	236
15°	2328	2328	2304	2281	2272	654
25°	2017	2006	1973	1903	1850	926
35°	1637	1625	1546	1429	1394	1023
45°	1256	1230	1124	1031	990	968
55°	872	846	767	676	641	783
65°	518	489	442	451	375	511
75°	208	193	182	173	190	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2532.7	2532.7	2532.7	2532.7	2532.7
2.5°	2515.1	2515.1	2515.1	2512.2	2512.2
5°	2488.8	2485.8	2485.8	2482.9	2482.9
7.5°	2468.3	2465.3	2462.4	2459.5	2453.6
10°	2439.0	2439.0	2436.0	2421.4	2418.5
12.5°	2392.1	2389.2	2377.5	2357.0	2351.1
15°	2327.7	2327.7	2304.3	2280.9	2272.1
17.5°	2257.4	2254.5	2225.2	2201.8	2190.1
20°	2181.3	2175.5	2146.2	2108.1	2087.6
22.5°	2096.4	2096.4	2061.3	2011.5	1991.0
25°	2017.4	2005.6	1973.4	1903.2	1850.5
27.5°	1926.6	1909.0	1873.9	1774.3	1712.8
30°	1827.0	1818.3	1768.5	1639.6	1592.8
32.5°	1733.3	1718.7	1666.0	1531.3	1493.3
35°	1636.7	1625.0	1546.0	1428.8	1393.7
37.5°	1540.1	1525.5	1425.9	1332.2	1288.3
40°	1443.5	1425.9	1317.6	1232.7	1185.8
42.5°	1352.7	1329.3	1223.9	1133.1	1080.4
45°	1256.1	1229.7	1124.3	1030.6	989.6
47.5°	1159.5	1136.0	1039.4	942.8	896.0
50°	1057.0	1036.5	948.7	852.0	802.3
52.5°	972.1	939.9	855.0	758.3	717.3
55°	872.5	846.2	767.1	676.4	641.2
57.5°	781.8	755.4	682.2	597.3	568.0
60°	696.9	658.8	597.3	524.1	500.7
62.5°	603.2	573.9	521.2	459.7	489.0
65°	518.2	489.0	442.1	450.9	374.8
67.5°	424.6	409.9	368.9	327.9	316.2
70°	345.5	327.9	313.3	269.4	257.7
72.5°	275.2	257.7	237.2	213.7	205.0
75°	207.9	193.2	181.5	172.7	190.3
77.5°	143.5	137.6	128.8	120.0	117.1
80°	93.7	90.8	87.8	84.9	82.0
82.5°	55.6	55.6	55.6	55.6	55.6
85°	29.3	32.2	35.1	38.1	41.0
87.5°	17.6	17.6	20.5	23.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)