

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: P560795

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560795
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-LD4-1HI-35-UNV-82-94-EDD
Description: 1X4 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: 3798.0 lumens
Efficiency: N/A
Efficacy: 87.9 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

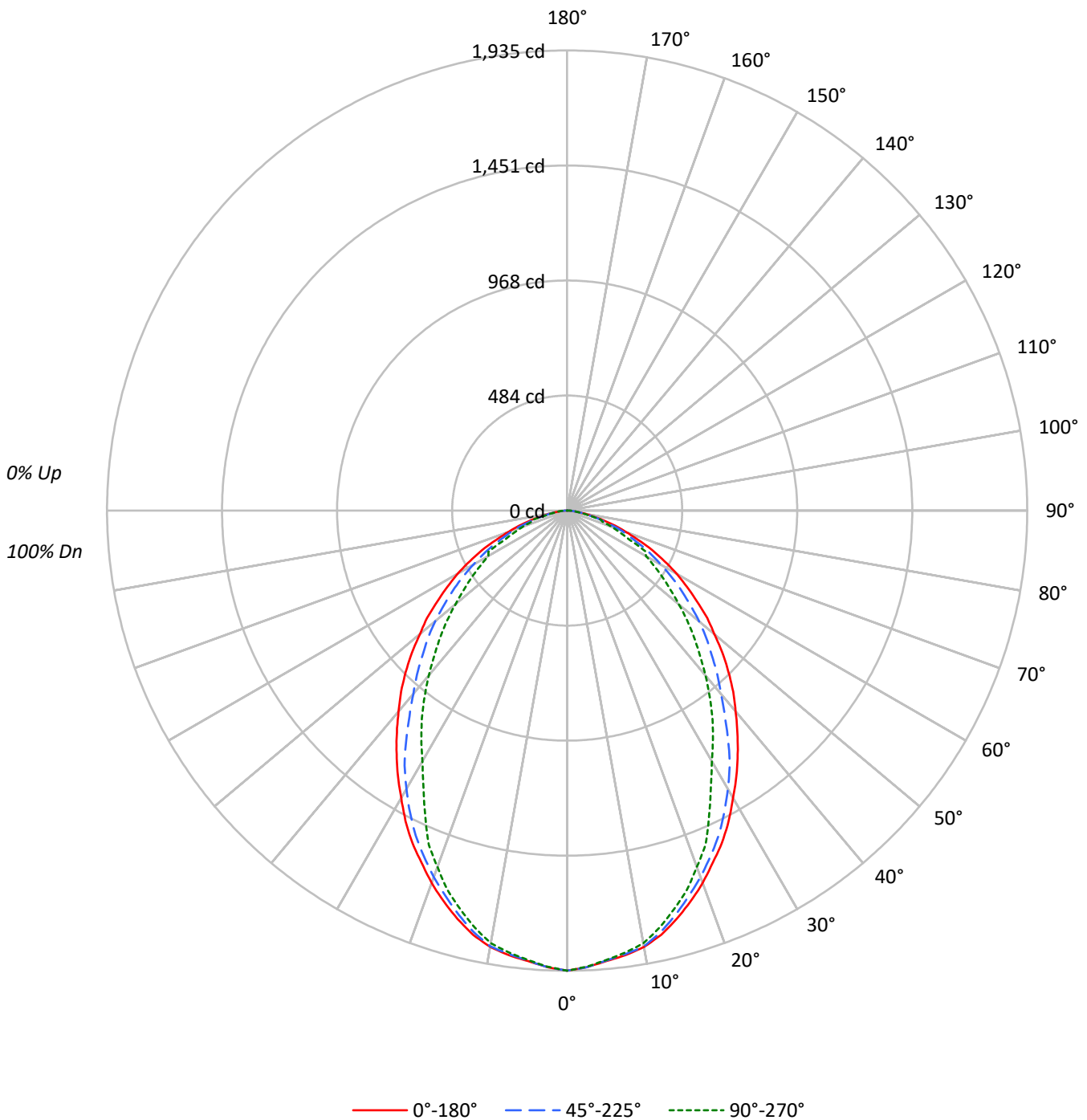
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5206	5206	5206
5°	5135	5129	5123
10°	5091	5085	5048
15°	4954	4904	4835
20°	4772	4695	4567
25°	4575	4476	4197
30°	4337	4198	3781
35°	4107	3879	3497
40°	3873	3536	3182
45°	3651	3269	2877
50°	3380	3034	2565
55°	3127	2749	2298
60°	2865	2456	2059
65°	2521	2150	1823
70°	2076	1883	1548
75°	1651	1442	1512
80°	1110	1040	970
85°	692	827	966

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3651 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.1	4.7
10°-20°	494.2	13.0
20°-30°	684.2	18.0
30°-40°	729.6	19.2
40°-50°	665.6	17.5
50°-60°	521.5	13.7
60°-70°	339.8	8.9
70°-80°	150.6	4.0
80°-90°	32.3	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°	1358.6	35.8
0°-40°	2088.2	55.0
0°-60°	3275.3	86.2
0°-90°	3798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3798.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1935	1935	1935	1935	1935	
5°	1901	1899	1899	1897	1897	180
15°	1778	1778	1760	1742	1736	500
25°	1541	1532	1508	1454	1414	707
35°	1250	1241	1181	1092	1065	782
45°	960	939	859	787	756	739
55°	666	646	586	517	490	598
65°	396	374	338	344	286	390
75°	159	148	139	132	145	170
85°	22	25	27	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1934.7	1934.7	1934.7	1934.7	1934.7
2.5°	1921.2	1921.2	1921.2	1919.0	1919.0
5°	1901.1	1898.9	1898.9	1896.6	1896.6
7.5°	1885.4	1883.2	1881.0	1878.7	1874.3
10°	1863.1	1863.1	1860.8	1849.7	1847.4
12.5°	1827.3	1825.1	1816.1	1800.5	1796.0
15°	1778.1	1778.1	1760.2	1742.3	1735.6
17.5°	1724.4	1722.2	1699.8	1681.9	1673.0
20°	1666.3	1661.8	1639.4	1610.3	1594.7
22.5°	1601.4	1601.4	1574.6	1536.5	1520.9
25°	1541.0	1532.1	1507.5	1453.8	1413.5
27.5°	1471.7	1458.3	1431.4	1355.4	1308.4
30°	1395.6	1388.9	1350.9	1252.5	1216.7
32.5°	1324.1	1312.9	1272.6	1169.7	1140.7
35°	1250.3	1241.3	1180.9	1091.5	1064.6
37.5°	1176.4	1165.3	1089.2	1017.6	984.1
40°	1102.6	1089.2	1006.5	941.6	905.8
42.5°	1033.3	1015.4	934.9	865.6	825.3
45°	959.5	939.4	858.9	787.3	756.0
47.5°	885.7	867.8	794.0	720.2	684.4
50°	807.4	791.8	724.7	650.8	612.8
52.5°	742.5	717.9	653.1	579.3	548.0
55°	666.5	646.4	586.0	516.7	489.8
57.5°	597.2	577.0	521.1	456.3	433.9
60°	532.3	503.2	456.3	400.3	382.5
62.5°	460.7	438.4	398.1	351.1	373.5
65°	395.9	373.5	337.7	344.4	286.3
67.5°	324.3	313.1	281.8	250.5	241.6
70°	263.9	250.5	239.3	205.8	196.8
72.5°	210.2	196.8	181.2	163.3	156.6
75°	158.8	147.6	138.7	132.0	145.4
77.5°	109.6	105.1	98.4	91.7	89.5
80°	71.6	69.3	67.1	64.9	62.6
82.5°	42.5	42.5	42.5	42.5	42.5
85°	22.4	24.6	26.8	29.1	31.3
87.5°	13.4	13.4	15.7	17.9	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)