

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: P560880

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560880
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-50-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3641.0 lumens
Efficiency: N/A
Efficacy: 84.3 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

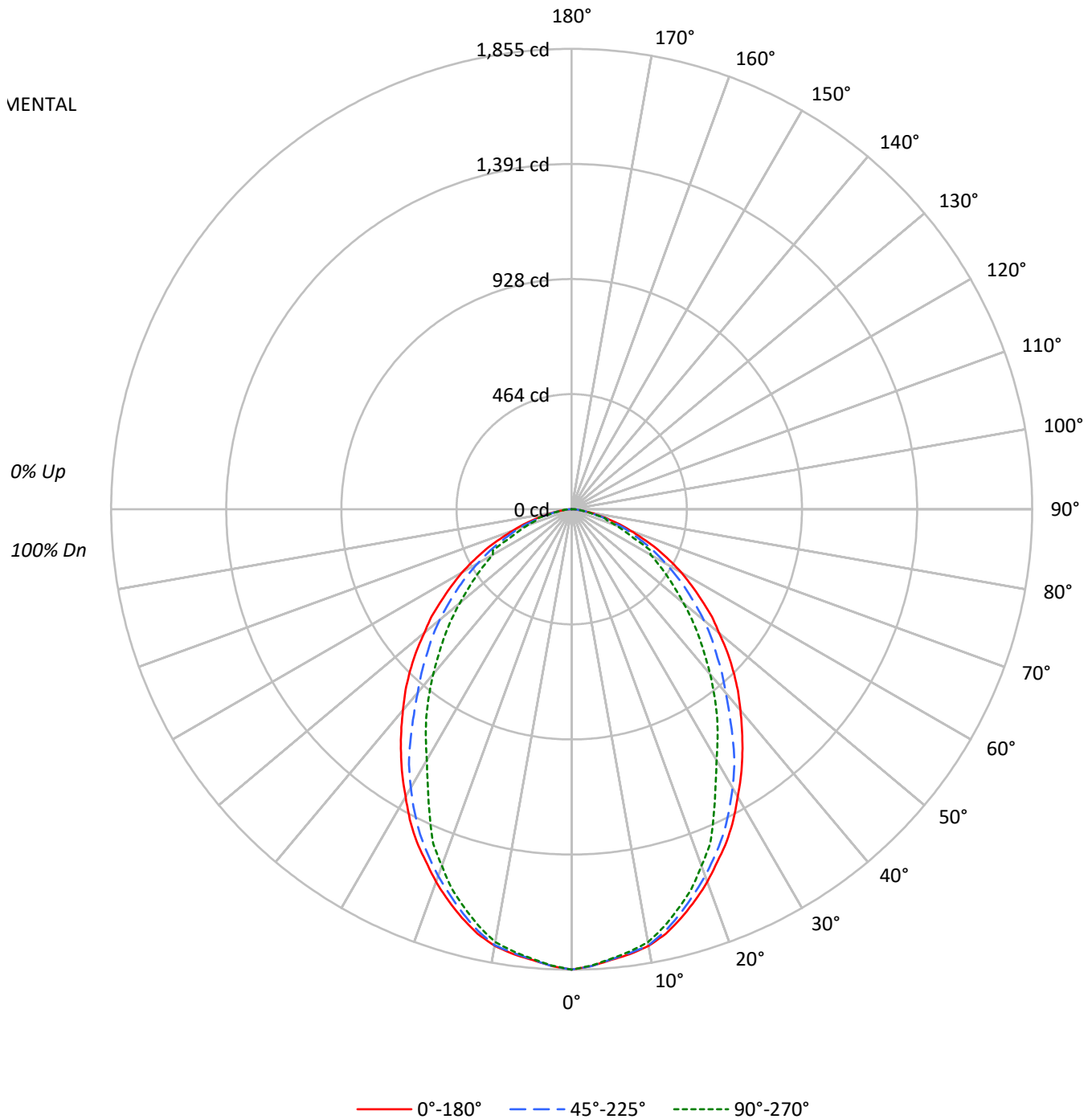
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4991	4991	4991
5°	4923	4917	4911
10°	4881	4874	4840
15°	4749	4701	4635
20°	4574	4501	4378
25°	4386	4291	4024
30°	4157	4024	3624
35°	3937	3719	3353
40°	3713	3390	3051
45°	3500	3133	2758
50°	3240	2908	2460
55°	2998	2636	2203
60°	2746	2354	1973
65°	2416	2062	1747
70°	1991	1805	1485
75°	1582	1382	1449
80°	1063	996	930
85°	661	794	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.6	4.7
10°-20°	473.8	13.0
20°-30°	656.0	18.0
30°-40°	699.4	19.2
40°-50°	638.1	17.5
50°-60°	499.9	13.7
60°-70°	325.8	8.9
70°-80°	144.3	4.0
80°-90°	31.0	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°	1302.4	35.8
0°-40°	2001.9	55.0
0°-60°	3139.8	86.2
0°-90°	3641.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3641.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1855	1855	1855	1855	1855	
5°	1822	1820	1820	1818	1818	173
15°	1705	1705	1687	1670	1664	479
25°	1477	1469	1445	1394	1355	678
35°	1199	1190	1132	1046	1021	749
45°	920	900	823	755	725	709
55°	639	620	562	495	470	573
65°	380	358	324	330	274	374
75°	152	142	133	126	139	163
85°	21	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1854.7	1854.7	1854.7	1854.7	1854.7
2.5°	1841.8	1841.8	1841.8	1839.7	1839.7
5°	1822.5	1820.4	1820.4	1818.2	1818.2
7.5°	1807.5	1805.4	1803.2	1801.1	1796.8
10°	1786.1	1786.1	1783.9	1773.2	1771.1
12.5°	1751.8	1749.6	1741.0	1726.0	1721.7
15°	1704.6	1704.6	1687.4	1670.3	1663.8
17.5°	1653.1	1651.0	1629.5	1612.4	1603.8
20°	1597.4	1593.1	1571.7	1543.8	1528.8
22.5°	1535.2	1535.2	1509.5	1473.0	1458.0
25°	1477.3	1468.7	1445.1	1393.7	1355.1
27.5°	1410.8	1398.0	1372.2	1299.3	1254.3
30°	1337.9	1331.5	1295.1	1200.7	1166.4
32.5°	1269.3	1258.6	1220.0	1121.4	1093.5
35°	1198.6	1190.0	1132.1	1046.3	1020.6
37.5°	1127.8	1117.1	1044.2	975.6	943.4
40°	1057.1	1044.2	964.9	902.7	868.4
42.5°	990.6	973.4	896.2	829.8	791.2
45°	919.8	900.5	823.3	754.7	724.7
47.5°	849.1	831.9	761.2	690.4	656.1
50°	774.0	759.0	694.7	623.9	587.5
52.5°	711.9	688.3	626.1	555.3	525.3
55°	639.0	619.7	561.8	495.3	469.6
57.5°	572.5	553.2	499.6	437.4	416.0
60°	510.3	482.4	437.4	383.8	366.6
62.5°	441.7	420.3	381.7	336.6	358.1
65°	379.5	358.1	323.8	330.2	274.4
67.5°	310.9	300.2	270.2	240.1	231.6
70°	253.0	240.1	229.4	197.3	188.7
72.5°	201.5	188.7	173.7	156.5	150.1
75°	152.2	141.5	132.9	126.5	139.4
77.5°	105.1	100.8	94.3	87.9	85.8
80°	68.6	66.5	64.3	62.2	60.0
82.5°	40.7	40.7	40.7	40.7	40.7
85°	21.4	23.6	25.7	27.9	30.0
87.5°	12.9	12.9	15.0	17.2	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)