

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: P561269

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561269
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-LD4-1STD-50-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3306.0 lumens
Efficiency: N/A
Efficacy: 99.3 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

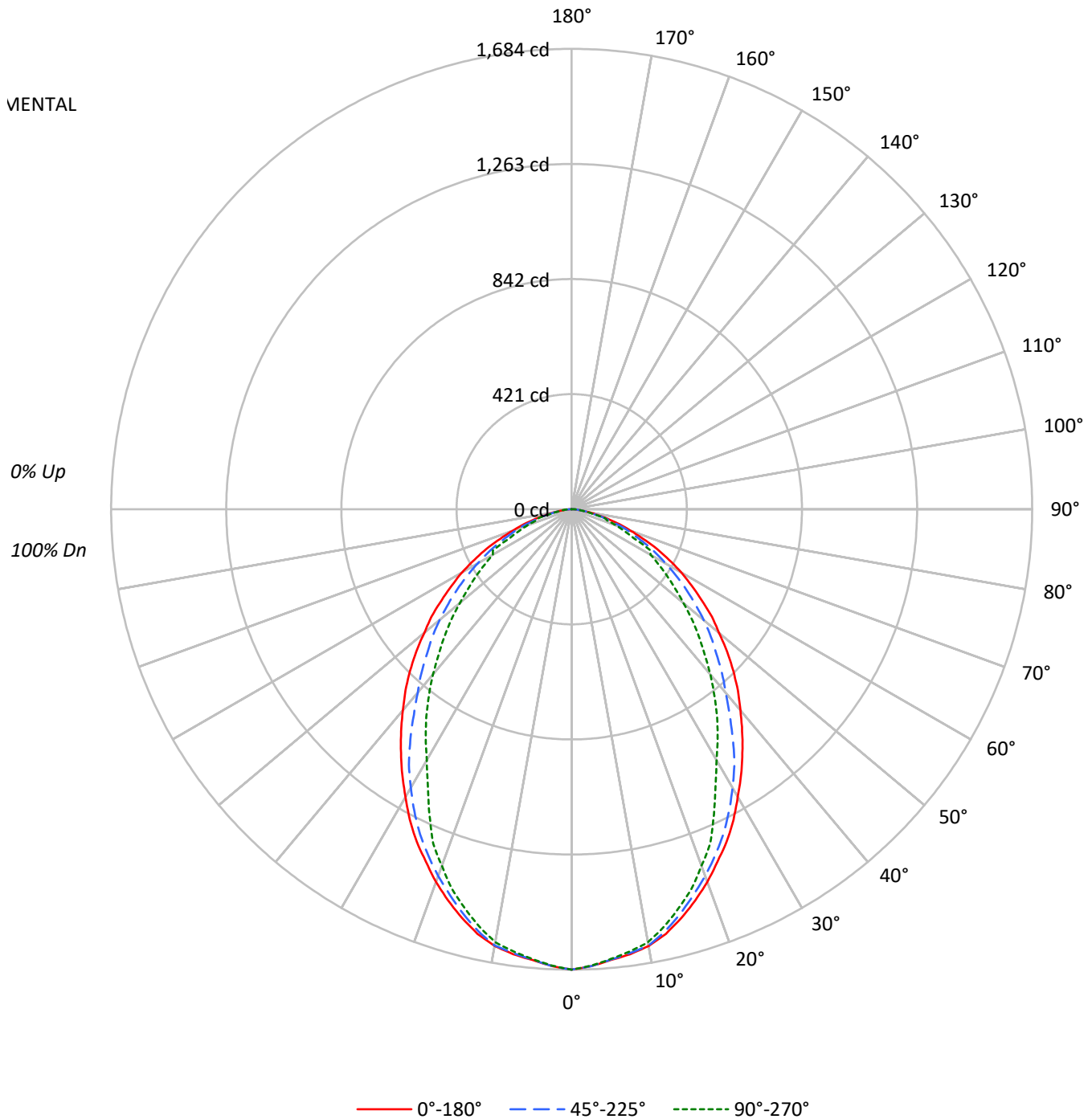
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4532	4532	4532
5°	4470	4465	4460
10°	4431	4426	4394
15°	4312	4269	4209
20°	4153	4086	3975
25°	3983	3896	3653
30°	3775	3654	3291
35°	3575	3377	3044
40°	3372	3078	2770
45°	3178	2845	2504
50°	2942	2641	2233
55°	2722	2393	2000
60°	2494	2138	1792
65°	2194	1872	1587
70°	1807	1639	1348
75°	1437	1255	1315
80°	965	905	845
85°	602	722	843

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3178 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	4.7
10°-20°	430.2	13.0
20°-30°	595.6	18.0
30°-40°	635.1	19.2
40°-50°	579.4	17.5
50°-60°	453.9	13.7
60°-70°	295.8	8.9
70°-80°	131.1	4.0
80°-90°	28.1	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°	1182.6	35.8
0°-40°	1817.7	55.0
0°-60°	2851.0	86.2
0°-90°	3306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3306.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1655	1653	1653	1651	1651	157
15°	1548	1548	1532	1517	1511	435
25°	1341	1334	1312	1266	1230	616
35°	1088	1080	1028	950	927	680
45°	835	818	748	685	658	643
55°	580	563	510	450	426	520
65°	345	325	294	300	249	340
75°	138	128	121	115	126	148
85°	20	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.0	1684.0	1684.0	1684.0	1684.0
2.5°	1672.4	1672.4	1672.4	1670.4	1670.4
5°	1654.8	1652.9	1652.9	1650.9	1650.9
7.5°	1641.2	1639.3	1637.3	1635.4	1631.5
10°	1621.7	1621.7	1619.8	1610.1	1608.1
12.5°	1590.6	1588.6	1580.8	1567.2	1563.3
15°	1547.8	1547.8	1532.2	1516.6	1510.8
17.5°	1501.0	1499.1	1479.6	1464.0	1456.2
20°	1450.4	1446.5	1427.0	1401.7	1388.1
22.5°	1394.0	1394.0	1370.6	1337.5	1323.9
25°	1341.4	1333.6	1312.2	1265.5	1230.4
27.5°	1281.0	1269.4	1246.0	1179.8	1138.9
30°	1214.8	1209.0	1175.9	1090.2	1059.1
32.5°	1152.5	1142.8	1107.8	1018.2	992.9
35°	1088.3	1080.5	1027.9	950.1	926.7
37.5°	1024.0	1014.3	948.1	885.8	856.6
40°	959.8	948.1	876.1	819.6	788.5
42.5°	899.4	883.9	813.8	753.4	718.4
45°	835.2	817.7	747.6	685.3	658.0
47.5°	771.0	755.4	691.1	626.9	595.7
50°	702.8	689.2	630.8	566.5	533.4
52.5°	646.4	624.9	568.5	504.2	477.0
55°	580.2	562.6	510.1	449.7	426.4
57.5°	519.8	502.3	453.6	397.2	377.7
60°	463.4	438.0	397.2	348.5	332.9
62.5°	401.1	381.6	346.5	305.7	325.1
65°	344.6	325.1	294.0	299.8	249.2
67.5°	282.3	272.6	245.3	218.0	210.3
70°	229.7	218.0	208.3	179.1	171.3
72.5°	183.0	171.3	157.7	142.1	136.3
75°	138.2	128.5	120.7	114.9	126.5
77.5°	95.4	91.5	85.7	79.8	77.9
80°	62.3	60.4	58.4	56.5	54.5
82.5°	37.0	37.0	37.0	37.0	37.0
85°	19.5	21.4	23.4	25.3	27.3
87.5°	11.7	11.7	13.6	15.6	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)