

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: P561649

Luminaire Tested: FSR-12-4-LD4-2LO-50-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561649
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-50-UNV-80-84-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5095.0 lumens
Efficiency: N/A
Efficacy: 108.9 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

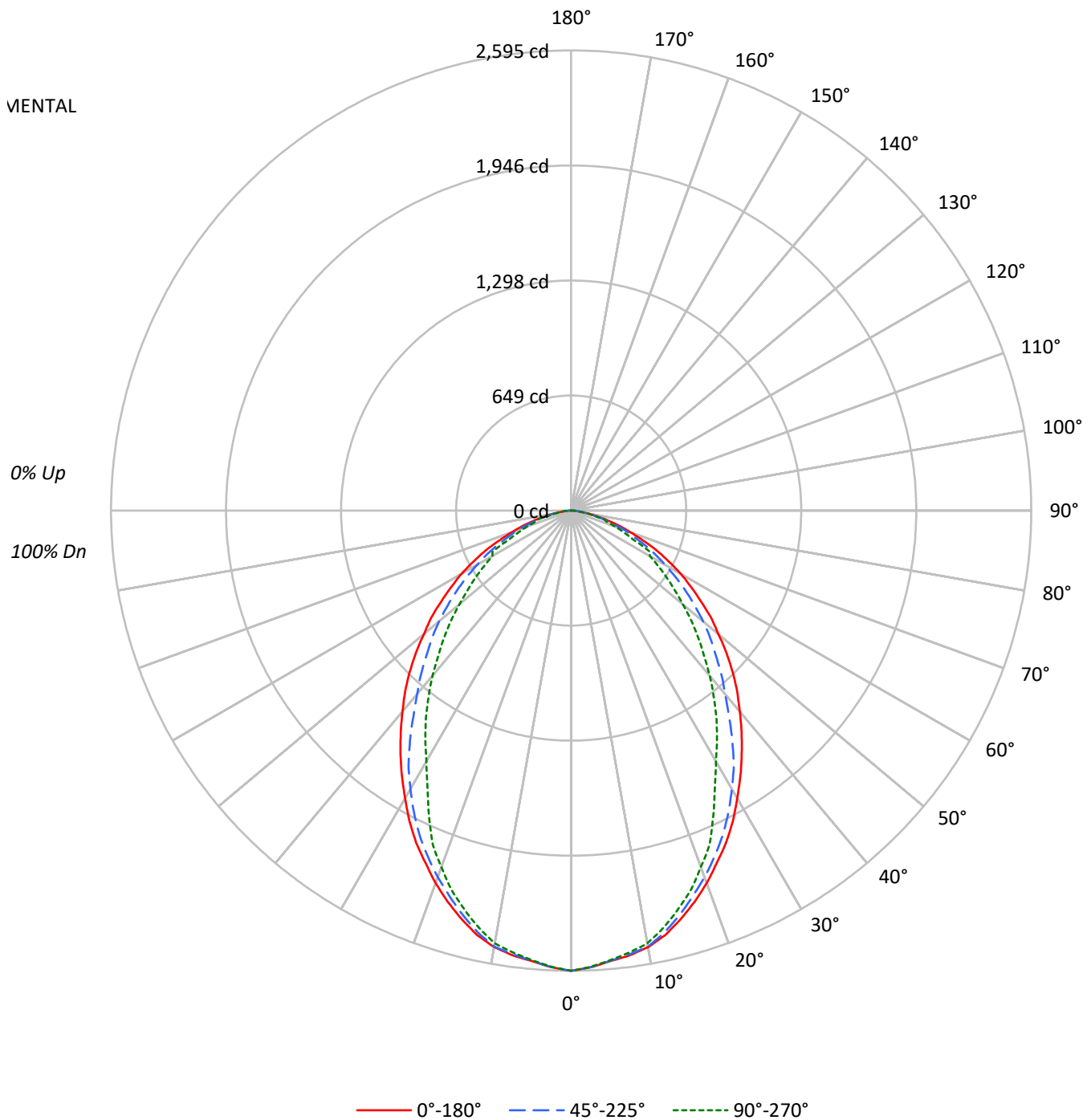
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6984	6984	6984
5°	6889	6881	6873
10°	6829	6821	6772
15°	6645	6578	6486
20°	6401	6298	6126
25°	6138	6005	5630
30°	5817	5631	5072
35°	5510	5204	4692
40°	5196	4743	4269
45°	4899	4384	3859
50°	4534	4070	3442
55°	4195	3688	3083
60°	3843	3294	2761
65°	3382	2885	2445
70°	2785	2526	2077
75°	2215	1934	2027
80°	1488	1395	1302
85°	926	1112	1297

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4899 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.6	4.7
10°-20°	663.0	13.0
20°-30°	917.9	18.0
30°-40°	978.8	19.2
40°-50°	892.9	17.5
50°-60°	699.5	13.7
60°-70°	455.9	8.9
70°-80°	202.0	4.0
80°-90°	43.4	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°	1822.5	35.8
0°-40°	2801.3	55.0
0°-60°	4393.7	86.2
0°-90°	5095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2595	2595	2595	2595	2595	
5°	2550	2547	2547	2544	2544	242
15°	2385	2385	2361	2337	2328	671
25°	2067	2055	2022	1950	1896	949
35°	1677	1665	1584	1464	1428	1049
45°	1287	1260	1152	1056	1014	991
55°	894	867	786	693	657	802
65°	531	501	453	462	384	523
75°	213	198	186	177	195	228
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2595.3	2595.3	2595.3	2595.3	2595.3
2.5°	2577.3	2577.3	2577.3	2574.3	2574.3
5°	2550.3	2547.3	2547.3	2544.3	2544.3
7.5°	2529.3	2526.3	2523.3	2520.3	2514.3
10°	2499.3	2499.3	2496.3	2481.3	2478.3
12.5°	2451.3	2448.3	2436.3	2415.3	2409.3
15°	2385.3	2385.3	2361.3	2337.3	2328.3
17.5°	2313.3	2310.3	2280.3	2256.3	2244.3
20°	2235.3	2229.3	2199.3	2160.3	2139.3
22.5°	2148.3	2148.3	2112.3	2061.3	2040.3
25°	2067.3	2055.3	2022.3	1950.2	1896.2
27.5°	1974.2	1956.2	1920.2	1818.2	1755.2
30°	1872.2	1863.2	1812.2	1680.2	1632.2
32.5°	1776.2	1761.2	1707.2	1569.2	1530.2
35°	1677.2	1665.2	1584.2	1464.2	1428.2
37.5°	1578.2	1563.2	1461.2	1365.2	1320.2
40°	1479.2	1461.2	1350.2	1263.2	1215.2
42.5°	1386.2	1362.2	1254.2	1161.1	1107.1
45°	1287.2	1260.2	1152.1	1056.1	1014.1
47.5°	1188.1	1164.1	1065.1	966.1	918.1
50°	1083.1	1062.1	972.1	873.1	822.1
52.5°	996.1	963.1	876.1	777.1	735.1
55°	894.1	867.1	786.1	693.1	657.1
57.5°	801.1	774.1	699.1	612.1	582.1
60°	714.1	675.1	612.1	537.1	513.1
62.5°	618.1	588.1	534.1	471.1	501.1
65°	531.1	501.1	453.1	462.1	384.0
67.5°	435.1	420.1	378.0	336.0	324.0
70°	354.0	336.0	321.0	276.0	264.0
72.5°	282.0	264.0	243.0	219.0	210.0
75°	213.0	198.0	186.0	177.0	195.0
77.5°	147.0	141.0	132.0	123.0	120.0
80°	96.0	93.0	90.0	87.0	84.0
82.5°	57.0	57.0	57.0	57.0	57.0
85°	30.0	33.0	36.0	39.0	42.0
87.5°	18.0	18.0	21.0	24.0	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)