

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: P561528

Luminaire Tested: FSR-12-4-LD4-2LO-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561528
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-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3505.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

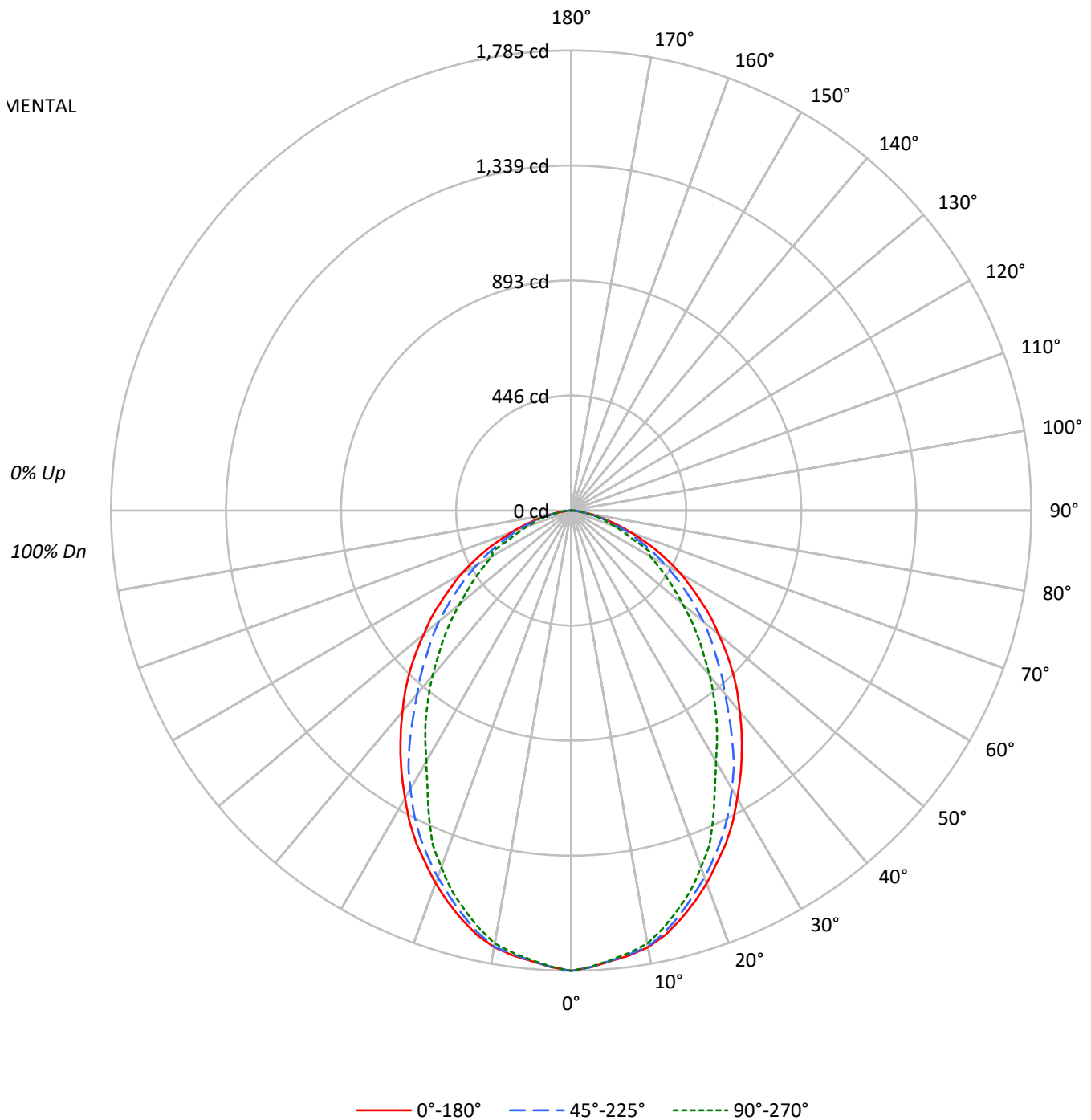
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4804	4804	4804
5°	4739	4734	4728
10°	4698	4693	4659
15°	4571	4525	4462
20°	4403	4332	4214
25°	4222	4131	3873
30°	4002	3874	3489
35°	3790	3580	3228
40°	3575	3263	2936
45°	3370	3016	2655
50°	3119	2800	2367
55°	2886	2537	2121
60°	2644	2266	1900
65°	2326	1985	1682
70°	1917	1738	1429
75°	1523	1331	1395
80°	1023	959	896
85°	636	766	892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.2	4.7
10°-20°	456.1	13.0
20°-30°	631.5	18.0
30°-40°	673.3	19.2
40°-50°	614.3	17.5
50°-60°	481.2	13.7
60°-70°	313.7	8.9
70°-80°	139.0	4.0
80°-90°	29.8	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°	1253.8	35.8
0°-40°	1927.1	55.0
0°-60°	3022.6	86.2
0°-90°	3505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1785	1785	1785	1785	1785	
5°	1754	1752	1752	1750	1750	167
15°	1641	1641	1624	1608	1602	461
25°	1422	1414	1391	1342	1304	653
35°	1154	1146	1090	1007	982	721
45°	886	867	793	726	698	682
55°	615	596	541	477	452	552
65°	365	345	312	318	264	360
75°	146	136	128	122	134	157
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1785.4	1785.4	1785.4	1785.4	1785.4
2.5°	1773.0	1773.0	1773.0	1771.0	1771.0
5°	1754.4	1752.4	1752.4	1750.3	1750.3
7.5°	1740.0	1737.9	1735.9	1733.8	1729.7
10°	1719.4	1719.4	1717.3	1707.0	1704.9
12.5°	1686.3	1684.3	1676.0	1661.6	1657.4
15°	1640.9	1640.9	1624.4	1607.9	1601.7
17.5°	1591.4	1589.3	1568.7	1552.2	1543.9
20°	1537.7	1533.6	1512.9	1486.1	1471.7
22.5°	1477.9	1477.9	1453.1	1418.0	1403.6
25°	1422.1	1413.9	1391.2	1341.6	1304.5
27.5°	1358.1	1345.8	1321.0	1250.8	1207.5
30°	1288.0	1281.8	1246.7	1155.9	1122.8
32.5°	1221.9	1211.6	1174.4	1079.5	1052.7
35°	1153.8	1145.5	1089.8	1007.3	982.5
37.5°	1085.7	1075.4	1005.2	939.1	908.2
40°	1017.6	1005.2	928.8	869.0	835.9
42.5°	953.6	937.1	862.8	798.8	761.6
45°	885.5	866.9	792.6	726.5	697.6
47.5°	817.4	800.9	732.7	664.6	631.6
50°	745.1	730.7	668.8	600.6	565.5
52.5°	685.3	662.6	602.7	534.6	505.7
55°	615.1	596.5	540.8	476.8	452.0
57.5°	551.1	532.5	480.9	421.1	400.4
60°	491.2	464.4	421.1	369.5	353.0
62.5°	425.2	404.6	367.4	324.1	344.7
65°	365.3	344.7	311.7	317.9	264.2
67.5°	299.3	289.0	260.1	231.2	222.9
70°	243.6	231.2	220.9	189.9	181.6
72.5°	194.0	181.6	167.2	150.7	144.5
75°	146.5	136.2	128.0	121.8	134.2
77.5°	101.1	97.0	90.8	84.6	82.6
80°	66.0	64.0	61.9	59.9	57.8
82.5°	39.2	39.2	39.2	39.2	39.2
85°	20.6	22.7	24.8	26.8	28.9
87.5°	12.4	12.4	14.4	16.5	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)