

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: P562375

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562375
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-24-4-LD4-1STD-40-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3511.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

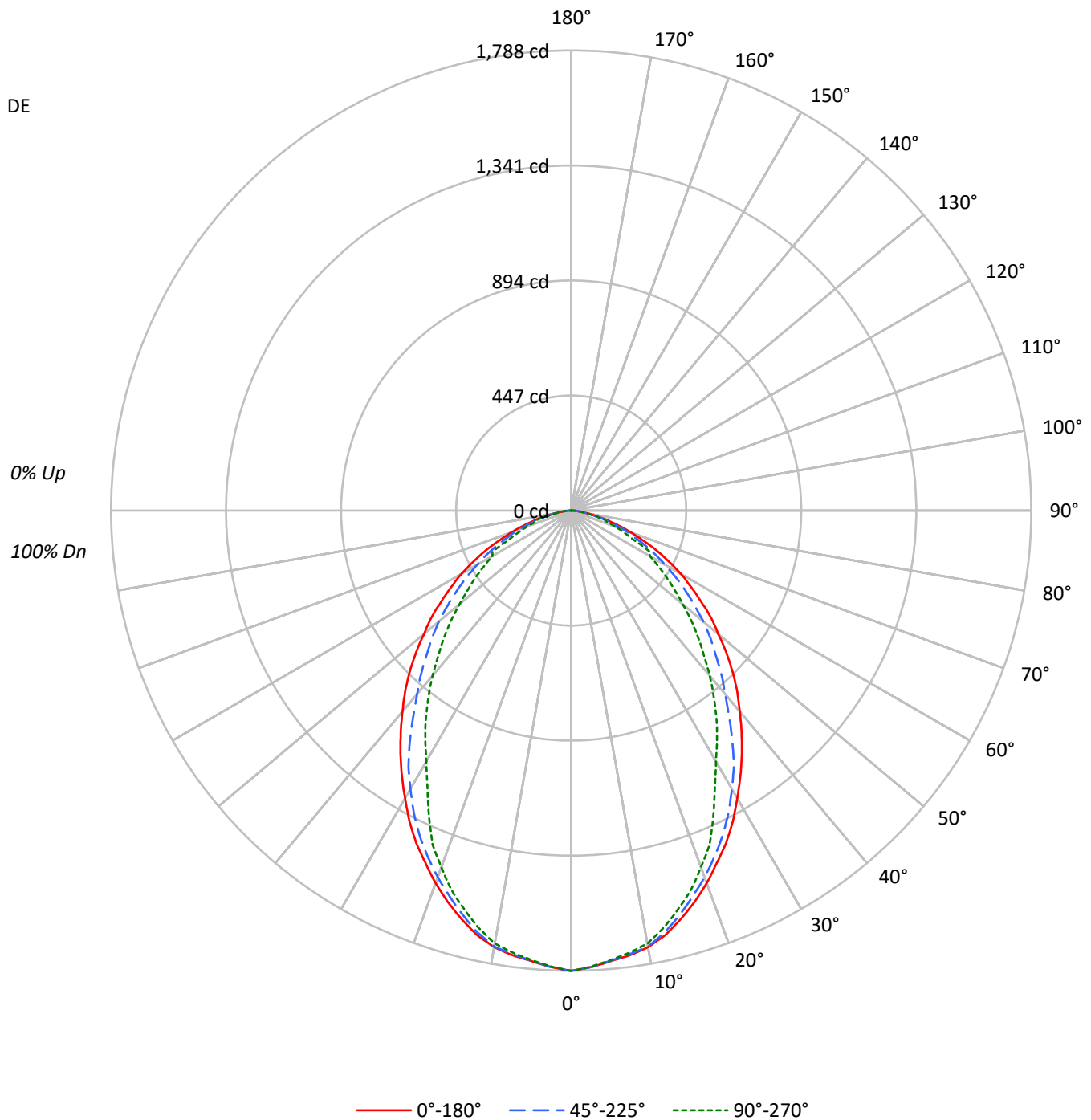
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2406	2406	2406
5°	2374	2371	2368
10°	2353	2350	2333
15°	2290	2267	2235
20°	2205	2170	2111
25°	2115	2069	1940
30°	2005	1940	1748
35°	1898	1793	1617
40°	1790	1634	1471
45°	1688	1511	1330
50°	1562	1402	1186
55°	1445	1271	1062
60°	1324	1135	952
65°	1165	994	843
70°	960	870	716
75°	763	666	699
80°	513	480	449
85°	320	383	446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1688 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.5	4.7
10°-20°	456.9	13.0
20°-30°	632.5	18.0
30°-40°	674.5	19.2
40°-50°	615.3	17.5
50°-60°	482.0	13.7
60°-70°	314.2	8.9
70°-80°	139.2	4.0
80°-90°	29.9	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°	1255.9	35.8
0°-40°	1930.4	55.0
0°-60°	3027.7	86.2
0°-90°	3511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1788	1788	1788	1788	1788	
5°	1757	1755	1755	1753	1753	167
15°	1644	1644	1627	1611	1604	462
25°	1425	1416	1394	1344	1307	654
35°	1156	1148	1092	1009	984	723
45°	887	868	794	728	699	683
55°	616	598	542	478	453	553
65°	366	345	312	318	265	361
75°	147	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°	1788.5	1788.5	1788.5	1788.5	1788.5
2.5°	1776.1	1776.1	1776.1	1774.0	1774.0
5°	1757.4	1755.4	1755.4	1753.3	1753.3
7.5°	1743.0	1740.9	1738.8	1736.8	1732.6
10°	1722.3	1722.3	1720.2	1709.9	1707.8
12.5°	1689.2	1687.1	1678.9	1664.4	1660.3
15°	1643.7	1643.7	1627.2	1610.6	1604.4
17.5°	1594.1	1592.0	1571.4	1554.8	1546.5
20°	1540.3	1536.2	1515.5	1488.7	1474.2
22.5°	1480.4	1480.4	1455.6	1420.4	1406.0
25°	1424.6	1416.3	1393.5	1343.9	1306.7
27.5°	1360.5	1348.1	1323.3	1253.0	1209.5
30°	1290.2	1284.0	1248.8	1157.8	1124.8
32.5°	1224.0	1213.7	1176.5	1081.3	1054.5
35°	1155.8	1147.5	1091.7	1009.0	984.2
37.5°	1087.5	1077.2	1006.9	940.7	909.7
40°	1019.3	1006.9	930.4	870.5	837.4
42.5°	955.2	938.7	864.2	800.2	762.9
45°	887.0	868.4	794.0	727.8	698.8
47.5°	818.8	802.2	734.0	665.8	632.7
50°	746.4	731.9	669.9	601.7	566.5
52.5°	686.4	663.7	603.7	535.5	506.6
55°	616.1	597.5	541.7	477.6	452.8
57.5°	552.0	533.4	481.7	421.8	401.1
60°	492.1	465.2	421.8	370.1	353.6
62.5°	425.9	405.2	368.0	324.6	345.3
65°	366.0	345.3	312.2	318.4	264.7
67.5°	299.8	289.5	260.5	231.6	223.3
70°	244.0	231.6	221.2	190.2	181.9
72.5°	194.4	181.9	167.5	150.9	144.7
75°	146.8	136.5	128.2	122.0	134.4
77.5°	101.3	97.2	91.0	84.8	82.7
80°	66.2	64.1	62.0	60.0	57.9
82.5°	39.3	39.3	39.3	39.3	39.3
85°	20.7	22.7	24.8	26.9	28.9
87.5°	12.4	12.4	14.5	16.5	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)