

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: P590214

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590214
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2HI-50-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4482.0 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

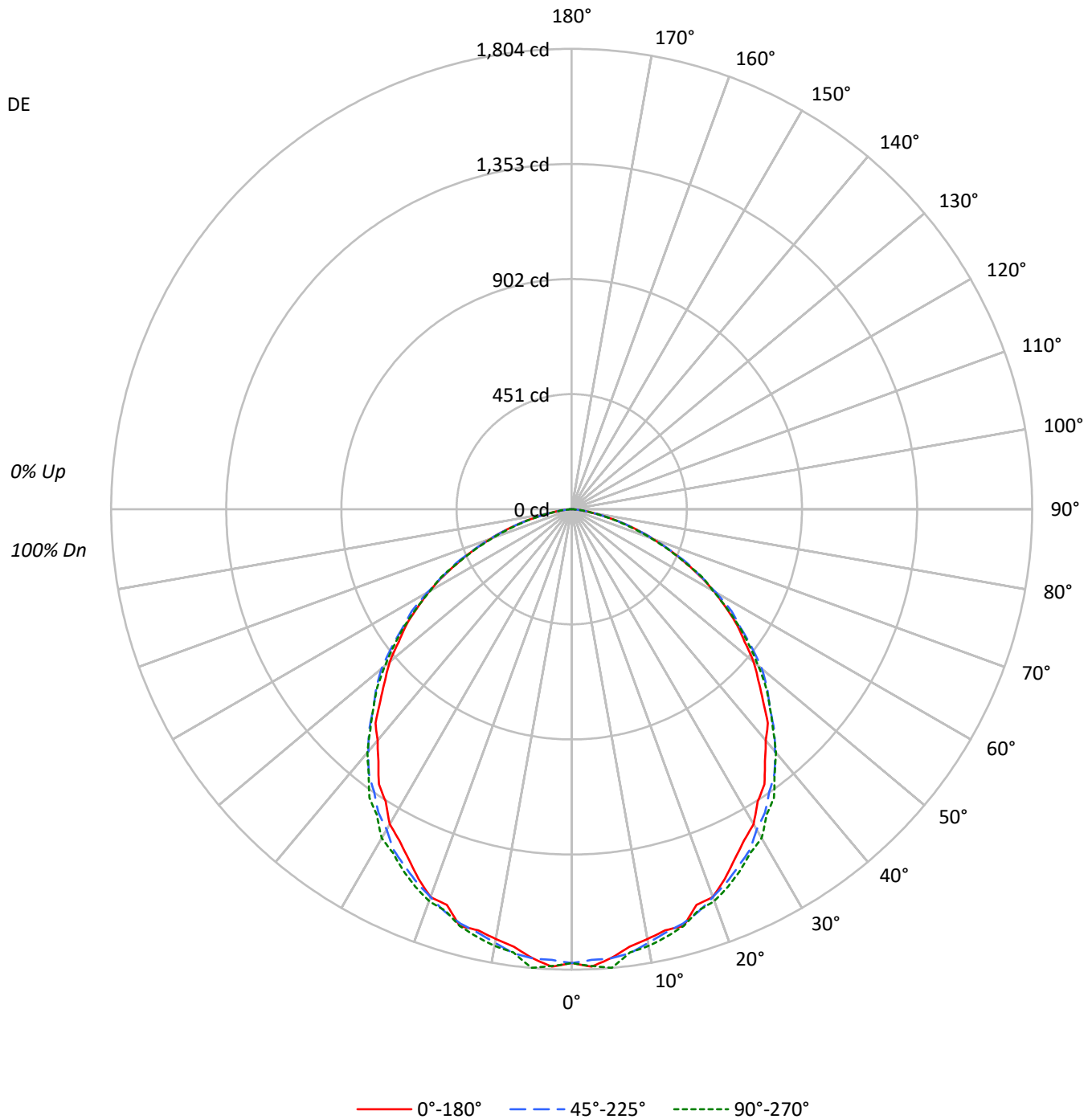
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4785	4785	4785
5°	4770	4772	4872
10°	4673	4714	4747
15°	4710	4684	4711
20°	4630	4630	4680
25°	4488	4586	4637
30°	4426	4504	4624
35°	4322	4435	4535
40°	4154	4354	4373
45°	4028	4172	4178
50°	3896	4072	3994
55°	3712	3784	3757
60°	3471	3506	3443
65°	3095	3174	3073
70°	2655	2665	2591
75°	2103	2098	2017
80°	1409	1370	1317
85°	766	760	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4279 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.3	3.7
10°-20°	474.1	10.6
20°-30°	710.3	15.8
30°-40°	841.8	18.8
40°-50°	843.4	18.8
50°-60°	715.9	16.0
60°-70°	482.7	10.8
70°-80°	212.1	4.7
80°-90°	34.5	0.8
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°	1351.7	30.2
0°-40°	2193.5	48.9
0°-60°	3752.8	83.7
0°-90°	4482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1778	1778	1778	1778	1778	
5°	1766	1762	1766	1761	1804	166
15°	1691	1671	1681	1690	1691	471
25°	1512	1520	1545	1565	1562	699
35°	1316	1320	1350	1381	1380	817
45°	1058	1078	1096	1124	1098	819
55°	791	786	807	801	801	704
65°	486	480	498	479	483	483
75°	202	198	202	188	194	217
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1778.3	1778.3	1778.3	1778.3	1778.3
2.5°	1793.7	1780.2	1767.6	1782.2	1791.2
5°	1765.7	1761.6	1766.4	1761.1	1803.6
7.5°	1729.4	1745.3	1754.5	1748.7	1751.3
10°	1710.1	1704.6	1725.1	1739.3	1737.2
12.5°	1689.5	1697.8	1698.9	1714.3	1715.7
15°	1690.6	1671.1	1681.4	1690.2	1690.9
17.5°	1625.0	1646.1	1653.2	1673.2	1648.4
20°	1616.9	1601.5	1616.9	1637.4	1634.1
22.5°	1567.6	1550.3	1583.4	1601.5	1600.4
25°	1511.5	1519.8	1544.6	1564.8	1561.6
27.5°	1462.4	1472.0	1507.4	1535.2	1517.3
30°	1424.5	1419.7	1449.5	1474.3	1488.1
32.5°	1356.8	1374.2	1409.1	1433.7	1420.6
35°	1315.7	1319.6	1350.1	1381.3	1380.4
37.5°	1243.8	1261.9	1304.9	1313.6	1305.6
40°	1182.5	1200.6	1239.4	1248.9	1245.0
42.5°	1137.3	1140.5	1173.8	1184.6	1167.3
45°	1058.5	1078.3	1096.2	1124.4	1097.8
47.5°	991.5	1000.6	1039.2	1046.8	1032.8
50°	930.6	933.8	972.6	963.2	954.0
52.5°	854.2	867.7	889.5	887.7	876.9
55°	791.2	786.0	806.6	801.1	800.9
57.5°	715.7	724.9	741.9	733.2	719.1
60°	645.0	645.2	651.4	641.5	639.7
62.5°	566.2	569.0	570.4	558.2	577.9
65°	486.1	479.7	498.5	479.4	482.6
67.5°	412.4	415.6	413.8	401.8	406.4
70°	337.5	341.7	338.7	325.1	329.3
72.5°	269.1	264.1	267.3	250.3	258.1
75°	202.3	198.2	201.8	187.6	194.0
77.5°	137.8	141.0	138.7	131.1	135.5
80°	90.9	88.4	88.4	84.0	85.0
82.5°	53.0	50.5	49.8	48.4	50.5
85°	24.8	24.1	24.6	23.9	23.0
87.5°	9.0	9.2	9.2	8.7	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)