

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: P590206

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590206
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-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 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: 4578.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

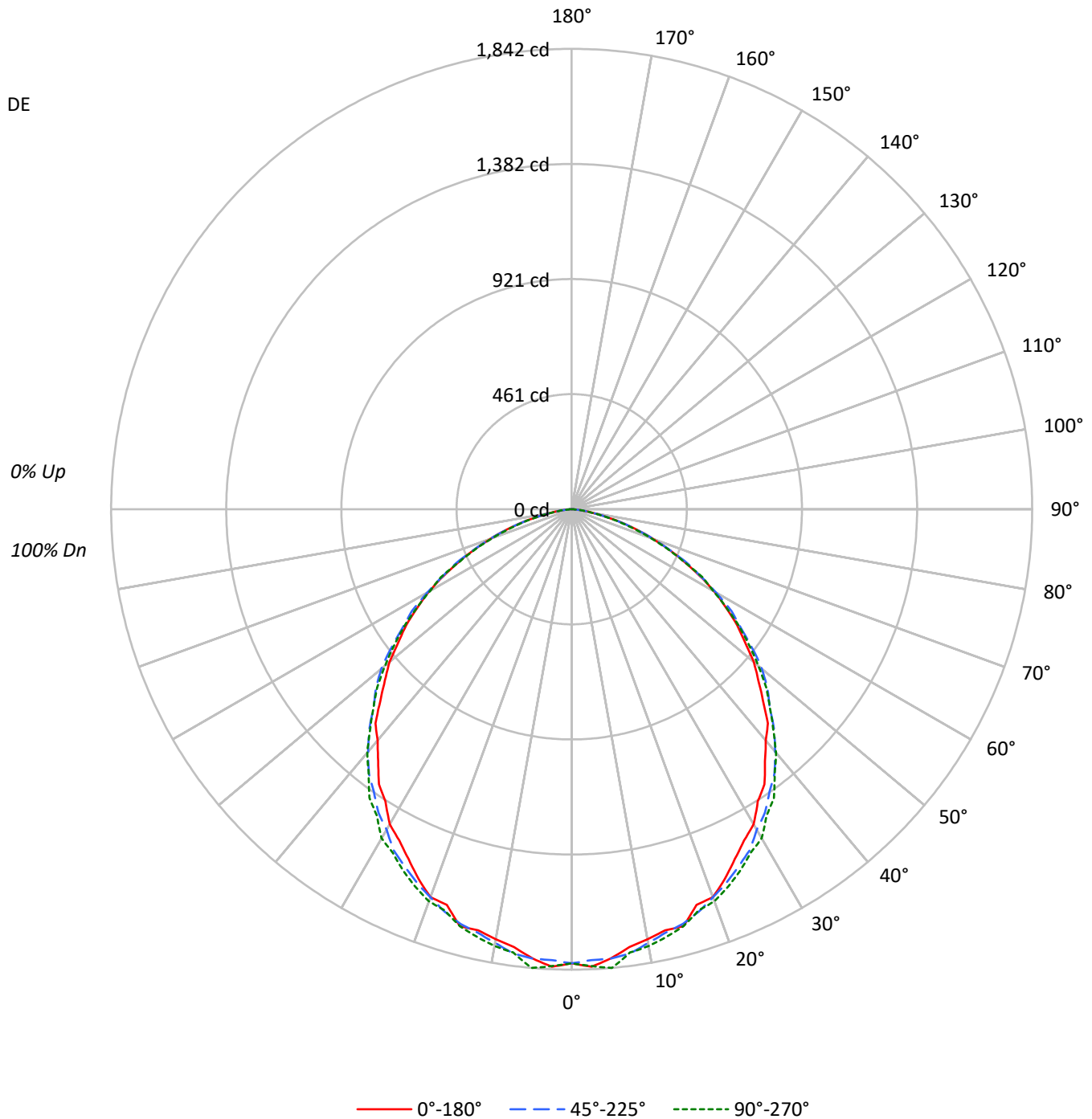
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4888	4888	4888
5°	4872	4874	4976
10°	4773	4815	4849
15°	4811	4785	4812
20°	4730	4730	4780
25°	4584	4684	4736
30°	4521	4601	4723
35°	4415	4530	4632
40°	4243	4447	4467
45°	4115	4261	4267
50°	3980	4159	4080
55°	3792	3865	3838
60°	3546	3581	3517
65°	3161	3242	3139
70°	2713	2722	2646
75°	2148	2144	2061
80°	1440	1399	1345
85°	781	775	726

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.9	3.7
10°-20°	484.2	10.6
20°-30°	725.5	15.8
30°-40°	859.9	18.8
40°-50°	861.5	18.8
50°-60°	731.2	16.0
60°-70°	493.0	10.8
70°-80°	216.6	4.7
80°-90°	35.2	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°	1380.6	30.2
0°-40°	2240.5	48.9
0°-60°	3833.2	83.7
0°-90°	4578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4578.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1816	1816	1816	1816	1816	
5°	1804	1799	1804	1799	1842	170
15°	1727	1707	1718	1726	1727	481
25°	1544	1552	1578	1598	1595	714
35°	1344	1348	1379	1411	1410	834
45°	1081	1101	1120	1148	1121	836
55°	808	803	824	818	818	719
65°	496	490	509	490	493	494
75°	207	202	206	192	198	221
85°	25	25	25	24	24	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1816.4	1816.4	1816.4	1816.4	1816.4
2.5°	1832.1	1818.3	1805.4	1820.4	1829.6
5°	1803.5	1799.3	1804.2	1798.8	1842.2
7.5°	1766.5	1782.7	1792.0	1786.2	1788.8
10°	1746.8	1741.2	1762.0	1776.6	1774.5
12.5°	1725.7	1734.1	1735.3	1751.0	1752.4
15°	1726.8	1706.9	1717.5	1726.4	1727.1
17.5°	1659.8	1681.3	1688.6	1709.0	1683.7
20°	1651.6	1635.8	1651.6	1672.4	1669.1
22.5°	1601.1	1583.5	1617.3	1635.8	1634.7
25°	1543.9	1552.4	1577.7	1598.3	1595.0
27.5°	1493.7	1503.6	1539.7	1568.1	1549.8
30°	1455.0	1450.1	1480.6	1505.9	1520.0
32.5°	1385.8	1403.7	1439.3	1464.4	1451.0
35°	1343.9	1347.8	1379.0	1410.9	1410.0
37.5°	1270.4	1289.0	1332.8	1341.7	1333.5
40°	1207.8	1226.4	1266.0	1275.6	1271.6
42.5°	1161.6	1164.9	1198.9	1209.9	1192.4
45°	1081.2	1101.4	1119.6	1148.5	1121.3
47.5°	1012.7	1022.1	1061.5	1069.2	1054.9
50°	950.6	953.8	993.5	983.9	974.5
52.5°	872.5	886.3	908.6	906.7	895.7
55°	808.2	802.8	823.9	818.3	818.0
57.5°	731.0	740.4	757.8	748.9	734.5
60°	658.8	659.0	665.4	655.3	653.4
62.5°	578.4	581.2	582.6	570.1	590.3
65°	496.5	489.9	509.2	489.7	493.0
67.5°	421.2	424.5	422.6	410.4	415.1
70°	344.8	349.0	345.9	332.1	336.3
72.5°	274.9	269.7	273.0	255.6	263.6
75°	206.6	202.4	206.2	191.6	198.2
77.5°	140.7	144.0	141.7	133.9	138.4
80°	92.9	90.3	90.3	85.8	86.8
82.5°	54.2	51.6	50.9	49.5	51.6
85°	25.3	24.6	25.1	24.4	23.5
87.5°	9.1	9.4	9.4	8.9	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)