

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: P590610

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590610
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-LD4-3LO-50-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4509.0 lumens
Efficiency: N/A
Efficacy: 128.5 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

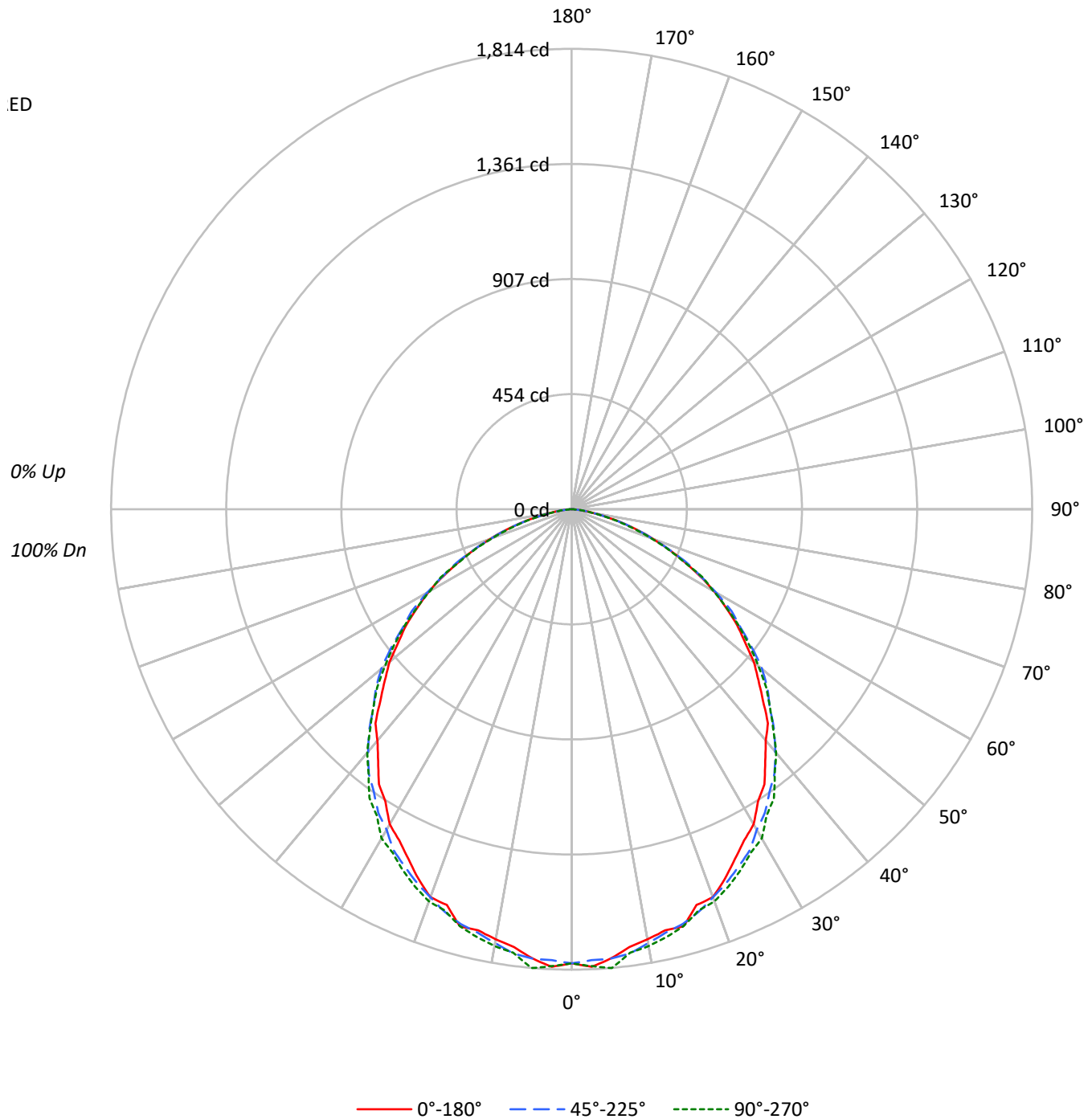
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4814	4814	4814
5°	4799	4800	4901
10°	4701	4742	4776
15°	4738	4713	4739
20°	4658	4658	4708
25°	4515	4614	4665
30°	4453	4531	4652
35°	4348	4462	4562
40°	4179	4380	4400
45°	4053	4197	4203
50°	3919	4096	4018
55°	3734	3807	3780
60°	3492	3527	3464
65°	3114	3193	3092
70°	2672	2681	2606
75°	2116	2111	2030
80°	1418	1378	1325
85°	769	763	713

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.3	3.7
10°-20°	477.0	10.6
20°-30°	714.6	15.8
30°-40°	846.9	18.8
40°-50°	848.5	18.8
50°-60°	720.2	16.0
60°-70°	485.6	10.8
70°-80°	213.3	4.7
80°-90°	34.7	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°	1359.8	30.2
0°-40°	2206.7	48.9
0°-60°	3775.4	83.7
0°-90°	4509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4509.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1789	1789	1789	1789	1789	
5°	1776	1772	1777	1772	1814	167
15°	1701	1681	1692	1700	1701	474
25°	1521	1529	1554	1574	1571	703
35°	1324	1328	1358	1390	1389	822
45°	1065	1085	1103	1131	1104	824
55°	796	791	812	806	806	708
65°	489	482	502	482	486	486
75°	204	199	203	189	195	218
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°	1789.1	1789.1	1789.1	1789.1	1789.1
2.5°	1804.5	1790.9	1778.2	1793.0	1802.0
5°	1776.4	1772.2	1777.0	1771.7	1814.5
7.5°	1739.9	1755.8	1765.0	1759.3	1761.8
10°	1720.5	1714.9	1735.5	1749.8	1747.7
12.5°	1699.7	1708.0	1709.1	1724.6	1726.0
15°	1700.8	1681.2	1691.6	1700.4	1701.0
17.5°	1634.8	1656.0	1663.2	1683.3	1658.3
20°	1626.7	1611.2	1626.7	1647.2	1644.0
22.5°	1577.0	1559.7	1592.9	1611.2	1610.0
25°	1520.6	1529.0	1553.9	1574.2	1571.0
27.5°	1471.2	1480.9	1516.5	1544.4	1526.4
30°	1433.1	1428.2	1458.3	1483.2	1497.1
32.5°	1365.0	1382.5	1417.6	1442.3	1429.2
35°	1323.6	1327.5	1358.3	1389.7	1388.7
37.5°	1251.3	1269.5	1312.7	1321.5	1313.4
40°	1189.6	1207.9	1246.9	1256.4	1252.5
42.5°	1144.1	1147.4	1180.8	1191.7	1174.4
45°	1064.9	1084.8	1102.8	1131.2	1104.4
47.5°	997.4	1006.7	1045.5	1053.1	1039.0
50°	936.2	939.5	978.5	969.0	959.8
52.5°	859.3	872.9	894.9	893.0	882.2
55°	796.0	790.7	811.5	805.9	805.7
57.5°	720.0	729.3	746.3	737.6	723.5
60°	648.9	649.1	655.3	645.4	643.6
62.5°	569.6	572.4	573.8	561.5	581.4
65°	489.0	482.5	501.5	482.3	485.6
67.5°	414.9	418.1	416.3	404.2	408.9
70°	339.6	343.7	340.7	327.1	331.2
72.5°	270.7	265.6	268.9	251.8	259.6
75°	203.5	199.3	203.0	188.7	195.2
77.5°	138.6	141.8	139.5	131.9	136.3
80°	91.5	88.9	88.9	84.5	85.5
82.5°	53.4	50.8	50.1	48.7	50.8
85°	24.9	24.3	24.7	24.0	23.1
87.5°	9.0	9.2	9.2	8.8	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)