

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: P590594

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590594
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-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4275.0 lumens
Efficiency: N/A
Efficacy: 121.8 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

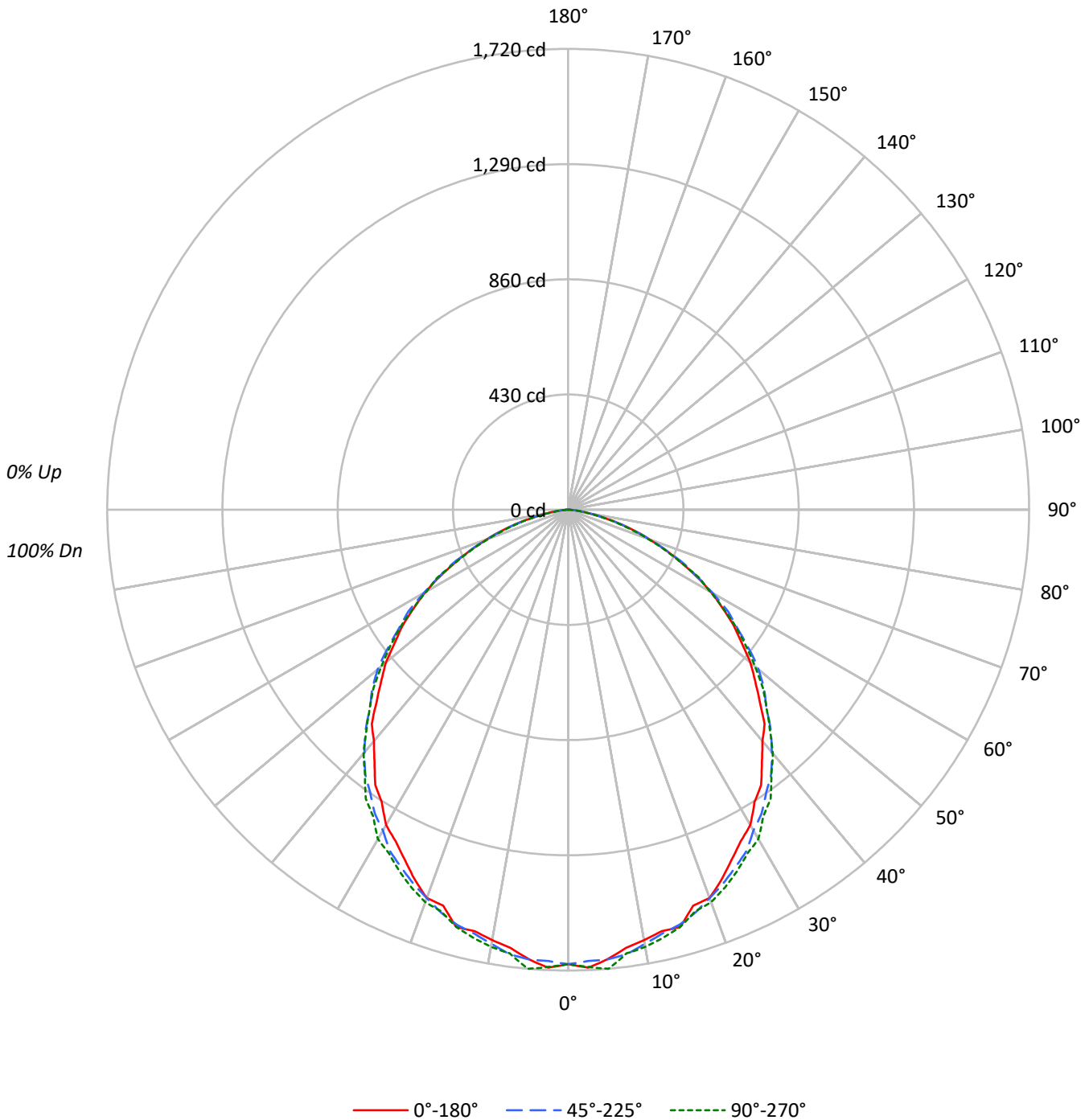
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4564	4564	4564
5°	4549	4551	4647
10°	4457	4496	4528
15°	4493	4468	4493
20°	4416	4416	4464
25°	4281	4374	4423
30°	4222	4296	4410
35°	4122	4231	4325
40°	3962	4153	4171
45°	3842	3979	3985
50°	3716	3884	3810
55°	3541	3610	3584
60°	3311	3344	3284
65°	2952	3028	2932
70°	2533	2541	2471
75°	2006	2001	1925
80°	1344	1306	1255
85°	732	722	676

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4082 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.6	3.7
10°-20°	452.2	10.6
20°-30°	677.5	15.8
30°-40°	803.0	18.8
40°-50°	804.4	18.8
50°-60°	682.8	16.0
60°-70°	460.4	10.8
70°-80°	202.3	4.7
80°-90°	32.9	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°	1289.2	30.2
0°-40°	2092.2	48.9
0°-60°	3579.5	83.7
0°-90°	4275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1696	1696	1696	1696	1696	
5°	1684	1680	1685	1680	1720	159
15°	1613	1594	1604	1612	1613	449
25°	1442	1450	1473	1492	1490	667
35°	1255	1259	1288	1318	1317	779
45°	1010	1028	1046	1072	1047	781
55°	755	750	769	764	764	671
65°	464	458	476	457	460	461
75°	193	189	192	179	185	207
85°	24	23	23	23	22	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1696.2	1696.2	1696.2	1696.2	1696.2
2.5°	1710.9	1698.0	1685.9	1699.9	1708.5
5°	1684.2	1680.2	1684.8	1679.8	1720.3
7.5°	1649.6	1664.7	1673.4	1668.0	1670.4
10°	1631.2	1625.9	1645.4	1659.0	1657.0
12.5°	1611.5	1619.3	1620.4	1635.1	1636.4
15°	1612.6	1593.9	1603.8	1612.1	1612.8
17.5°	1549.9	1570.1	1576.9	1595.9	1572.3
20°	1542.2	1527.6	1542.2	1561.7	1558.7
22.5°	1495.2	1478.7	1510.3	1527.6	1526.5
25°	1441.7	1449.6	1473.3	1492.5	1489.5
27.5°	1394.9	1404.1	1437.8	1464.3	1447.2
30°	1358.7	1354.1	1382.6	1406.2	1419.4
32.5°	1294.1	1310.8	1344.0	1367.5	1355.0
35°	1254.9	1258.6	1287.8	1317.5	1316.7
37.5°	1186.4	1203.7	1244.6	1252.9	1245.3
40°	1127.9	1145.2	1182.2	1191.2	1187.5
42.5°	1084.7	1087.8	1119.6	1129.9	1113.4
45°	1009.6	1028.5	1045.5	1072.5	1047.1
47.5°	945.7	954.4	991.2	998.5	985.1
50°	887.6	890.7	927.7	918.7	910.0
52.5°	814.7	827.6	848.4	846.7	836.4
55°	754.7	749.7	769.4	764.1	763.9
57.5°	682.6	691.4	707.6	699.3	685.9
60°	615.2	615.4	621.3	611.9	610.2
62.5°	540.1	542.7	544.0	532.4	551.2
65°	463.6	457.5	475.5	457.3	460.4
67.5°	393.3	396.4	394.7	383.3	387.6
70°	321.9	325.9	323.0	310.1	314.1
72.5°	256.7	251.9	254.9	238.7	246.2
75°	192.9	189.0	192.5	178.9	185.1
77.5°	131.4	134.5	132.3	125.1	129.2
80°	86.7	84.3	84.3	80.2	81.0
82.5°	50.6	48.2	47.5	46.2	48.2
85°	23.7	23.0	23.4	22.8	21.9
87.5°	8.5	8.8	8.8	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)