

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: P590554

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590554
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-40-UNV-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4425.0 lumens
Efficiency: N/A
Efficacy: 126.1 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

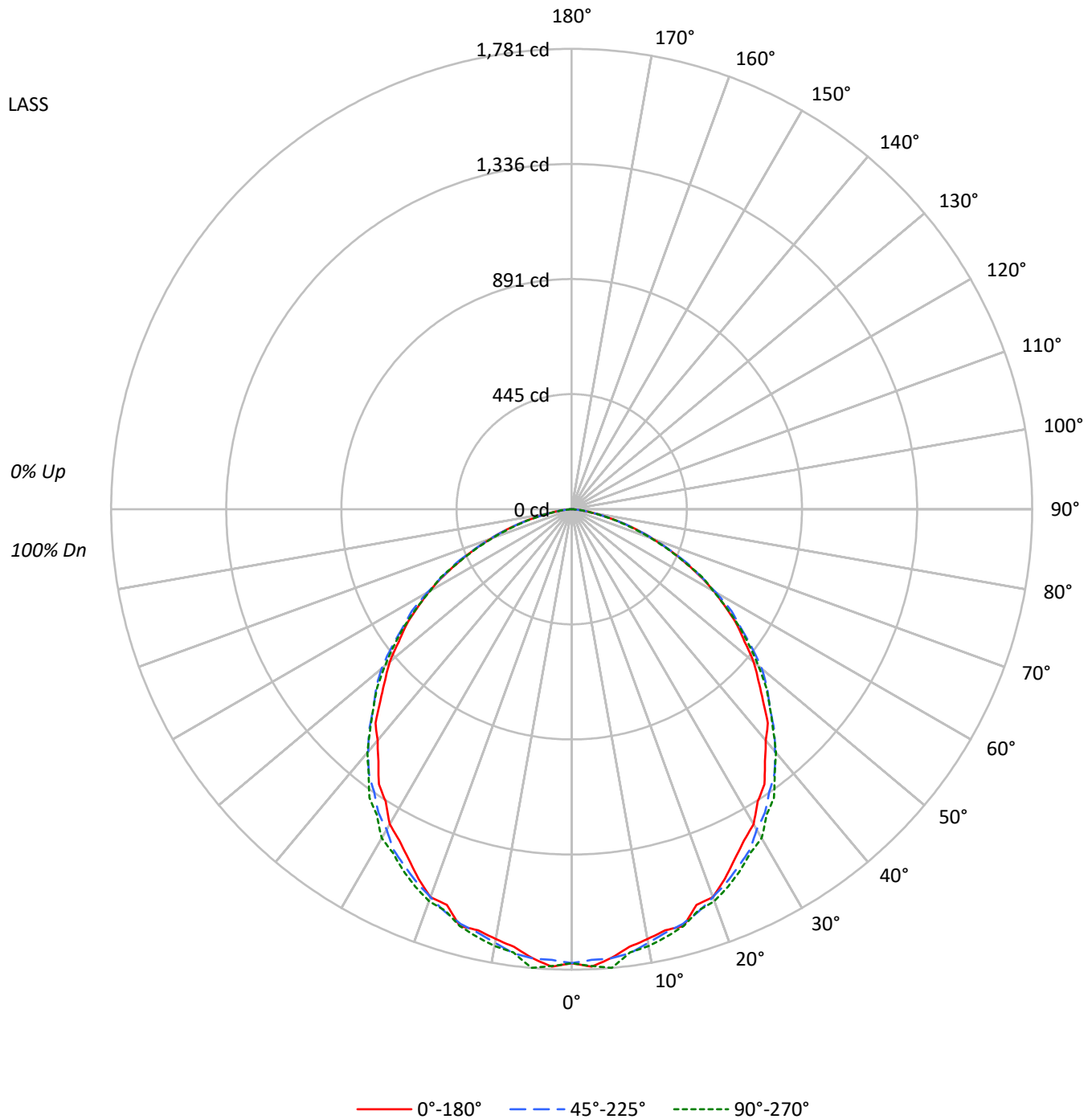
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	4725	4725	4725
5°	4709	4711	4810
10°	4614	4654	4687
15°	4650	4625	4651
20°	4572	4572	4620
25°	4431	4528	4578
30°	4370	4447	4565
35°	4267	4379	4477
40°	4101	4299	4318
45°	3977	4118	4125
50°	3846	4020	3943
55°	3665	3736	3710
60°	3427	3461	3399
65°	3056	3133	3034
70°	2622	2631	2558
75°	2076	2072	1992
80°	1392	1353	1300
85°	756	750	701

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4225 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	3.7
10°-20°	468.1	10.6
20°-30°	701.3	15.8
30°-40°	831.1	18.8
40°-50°	832.7	18.8
50°-60°	706.8	16.0
60°-70°	476.5	10.8
70°-80°	209.4	4.7
80°-90°	34.0	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°	1334.5	30.2
0°-40°	2165.6	48.9
0°-60°	3705.1	83.7
0°-90°	4425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1756	1756	1756	1756	1756	
5°	1743	1739	1744	1739	1781	164
15°	1669	1650	1660	1669	1669	465
25°	1492	1500	1525	1545	1542	690
35°	1299	1303	1333	1364	1363	806
45°	1045	1064	1082	1110	1084	808
55°	781	776	796	791	791	695
65°	480	474	492	473	476	477
75°	200	196	199	185	192	214
85°	24	24	24	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1755.7	1755.7	1755.7	1755.7	1755.7
2.5°	1770.9	1757.5	1745.1	1759.6	1768.4
5°	1743.3	1739.2	1743.9	1738.7	1780.7
7.5°	1707.4	1723.1	1732.2	1726.5	1729.0
10°	1688.4	1683.0	1703.1	1717.2	1715.2
12.5°	1668.0	1676.2	1677.3	1692.5	1693.8
15°	1669.1	1649.9	1660.1	1668.7	1669.4
17.5°	1604.3	1625.2	1632.2	1651.9	1627.4
20°	1596.4	1581.2	1596.4	1616.5	1613.4
22.5°	1547.6	1530.6	1563.3	1581.2	1580.0
25°	1492.3	1500.5	1525.0	1544.9	1541.7
27.5°	1443.8	1453.3	1488.2	1515.7	1498.0
30°	1406.4	1401.6	1431.1	1455.6	1469.2
32.5°	1339.5	1356.8	1391.2	1415.5	1402.5
35°	1298.9	1302.8	1332.9	1363.8	1362.9
37.5°	1228.0	1245.9	1288.3	1296.9	1289.0
40°	1167.5	1185.4	1223.7	1233.0	1229.1
42.5°	1122.8	1126.0	1158.8	1169.5	1152.5
45°	1045.0	1064.5	1082.2	1110.1	1083.8
47.5°	978.9	987.9	1026.0	1033.5	1019.7
50°	918.8	922.0	960.3	951.0	941.9
52.5°	843.3	856.7	878.2	876.4	865.7
55°	781.2	776.0	796.4	790.9	790.7
57.5°	706.6	715.7	732.4	723.8	710.0
60°	636.8	637.0	643.1	633.4	631.6
62.5°	559.0	561.7	563.1	551.1	570.6
65°	479.9	473.6	492.1	473.3	476.5
67.5°	407.1	410.3	408.5	396.7	401.2
70°	333.2	337.3	334.4	321.0	325.1
72.5°	265.7	260.7	263.9	247.1	254.8
75°	199.7	195.6	199.3	185.2	191.6
77.5°	136.0	139.2	136.9	129.4	133.7
80°	89.8	87.3	87.3	83.0	83.9
82.5°	52.4	49.9	49.2	47.8	49.9
85°	24.5	23.8	24.3	23.6	22.7
87.5°	8.8	9.1	9.1	8.6	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)