

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: P590523

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590523
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-35-UNV-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

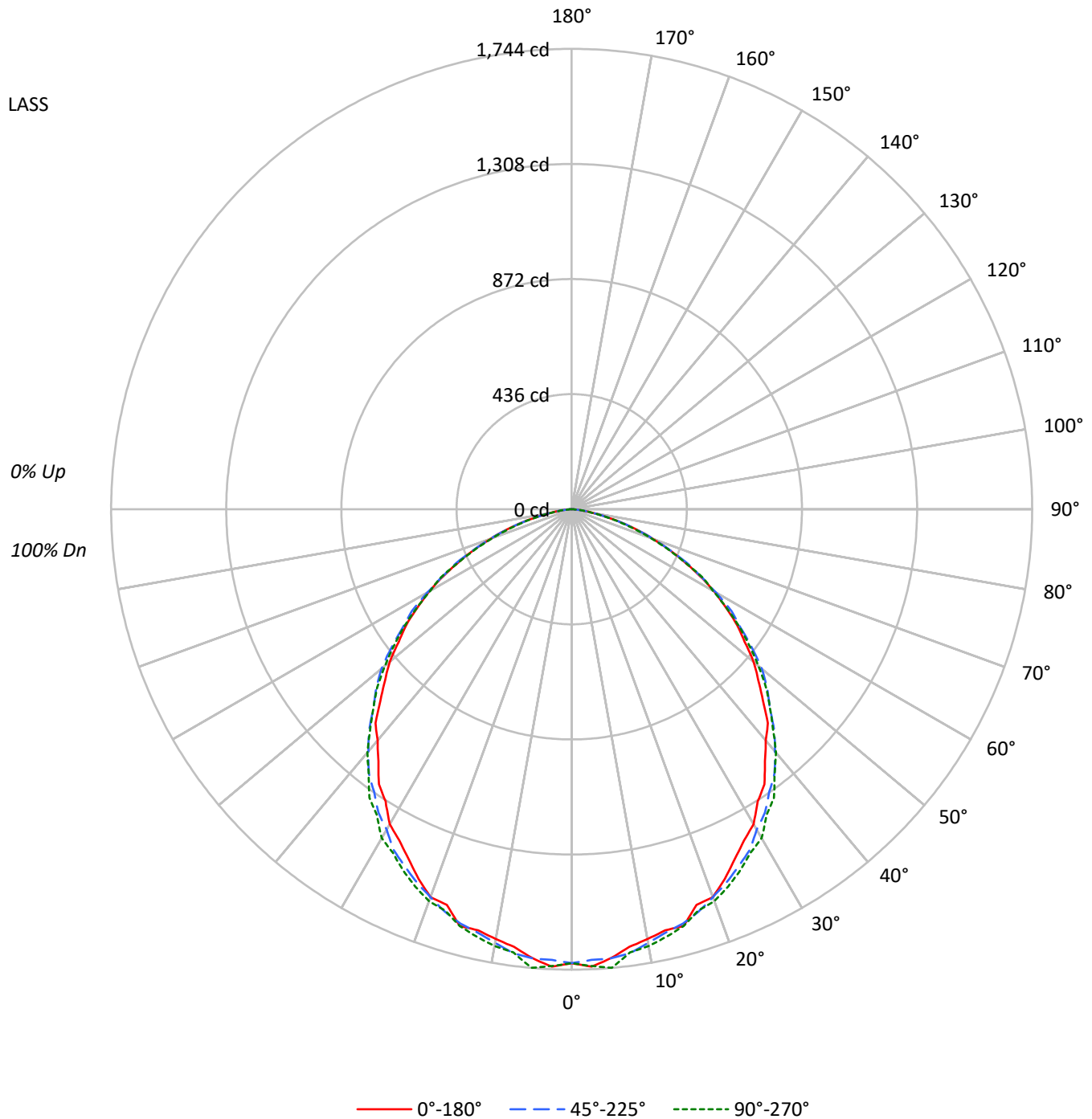
Lumens per Lamp: N/A
Luminaire Lumens: 4333.0 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	4626	4626	4626
5°	4611	4613	4710
10°	4518	4557	4589
15°	4553	4528	4554
20°	4477	4477	4524
25°	4339	4434	4483
30°	4279	4355	4470
35°	4178	4288	4384
40°	4016	4209	4228
45°	3894	4033	4039
50°	3767	3936	3861
55°	3589	3658	3633
60°	3356	3390	3328
65°	2992	3068	2971
70°	2567	2576	2504
75°	2034	2028	1951
80°	1362	1325	1272
85°	741	735	685

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	3.7
10°-20°	458.3	10.6
20°-30°	686.7	15.8
30°-40°	813.8	18.8
40°-50°	815.4	18.8
50°-60°	692.1	16.0
60°-70°	466.6	10.8
70°-80°	205.0	4.7
80°-90°	33.3	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°	1306.7	30.2
0°-40°	2120.6	48.9
0°-60°	3628.0	83.7
0°-90°	4333.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4333.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1719	1719	1719	1719	1719	
5°	1707	1703	1708	1703	1744	161
15°	1634	1616	1626	1634	1635	455
25°	1461	1469	1493	1513	1510	676
35°	1272	1276	1305	1335	1334	790
45°	1023	1042	1060	1087	1061	792
55°	765	760	780	774	774	680
65°	470	464	482	464	467	467
75°	196	192	195	181	188	210
85°	24	23	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1719.2	1719.2	1719.2	1719.2	1719.2
2.5°	1734.1	1721.0	1708.8	1723.0	1731.7
5°	1707.0	1703.0	1707.7	1702.6	1743.6
7.5°	1671.9	1687.3	1696.1	1690.6	1693.0
10°	1653.3	1648.0	1667.7	1681.5	1679.5
12.5°	1633.3	1641.3	1642.4	1657.3	1658.6
15°	1634.4	1615.6	1625.5	1634.0	1634.7
17.5°	1570.9	1591.4	1598.2	1617.6	1593.6
20°	1563.2	1548.3	1563.2	1582.9	1579.8
22.5°	1515.4	1498.8	1530.8	1548.3	1547.2
25°	1461.3	1469.3	1493.3	1512.8	1509.7
27.5°	1413.8	1423.1	1457.3	1484.1	1466.8
30°	1377.2	1372.5	1401.4	1425.3	1438.6
32.5°	1311.7	1328.5	1362.3	1386.0	1373.4
35°	1271.9	1275.7	1305.2	1335.4	1334.5
37.5°	1202.5	1220.0	1261.5	1269.9	1262.2
40°	1143.2	1160.7	1198.2	1207.3	1203.6
42.5°	1099.5	1102.6	1134.8	1145.2	1128.5
45°	1023.3	1042.4	1059.7	1087.0	1061.3
47.5°	958.5	967.4	1004.7	1012.0	998.5
50°	899.7	902.8	940.3	931.2	922.3
52.5°	825.8	838.9	859.9	858.2	847.7
55°	764.9	759.8	779.8	774.5	774.3
57.5°	691.9	700.8	717.2	708.8	695.2
60°	623.5	623.8	629.8	620.2	618.4
62.5°	547.4	550.1	551.4	539.6	558.7
65°	469.9	463.7	481.9	463.5	466.6
67.5°	398.7	401.8	400.0	388.5	392.9
70°	326.3	330.3	327.4	314.3	318.3
72.5°	260.2	255.3	258.4	242.0	249.5
75°	195.6	191.6	195.1	181.4	187.6
77.5°	133.2	136.3	134.1	126.7	131.0
80°	87.9	85.5	85.5	81.2	82.1
82.5°	51.3	48.8	48.2	46.8	48.8
85°	24.0	23.3	23.8	23.1	22.2
87.5°	8.7	8.9	8.9	8.4	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)