

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: P590524

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590524
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

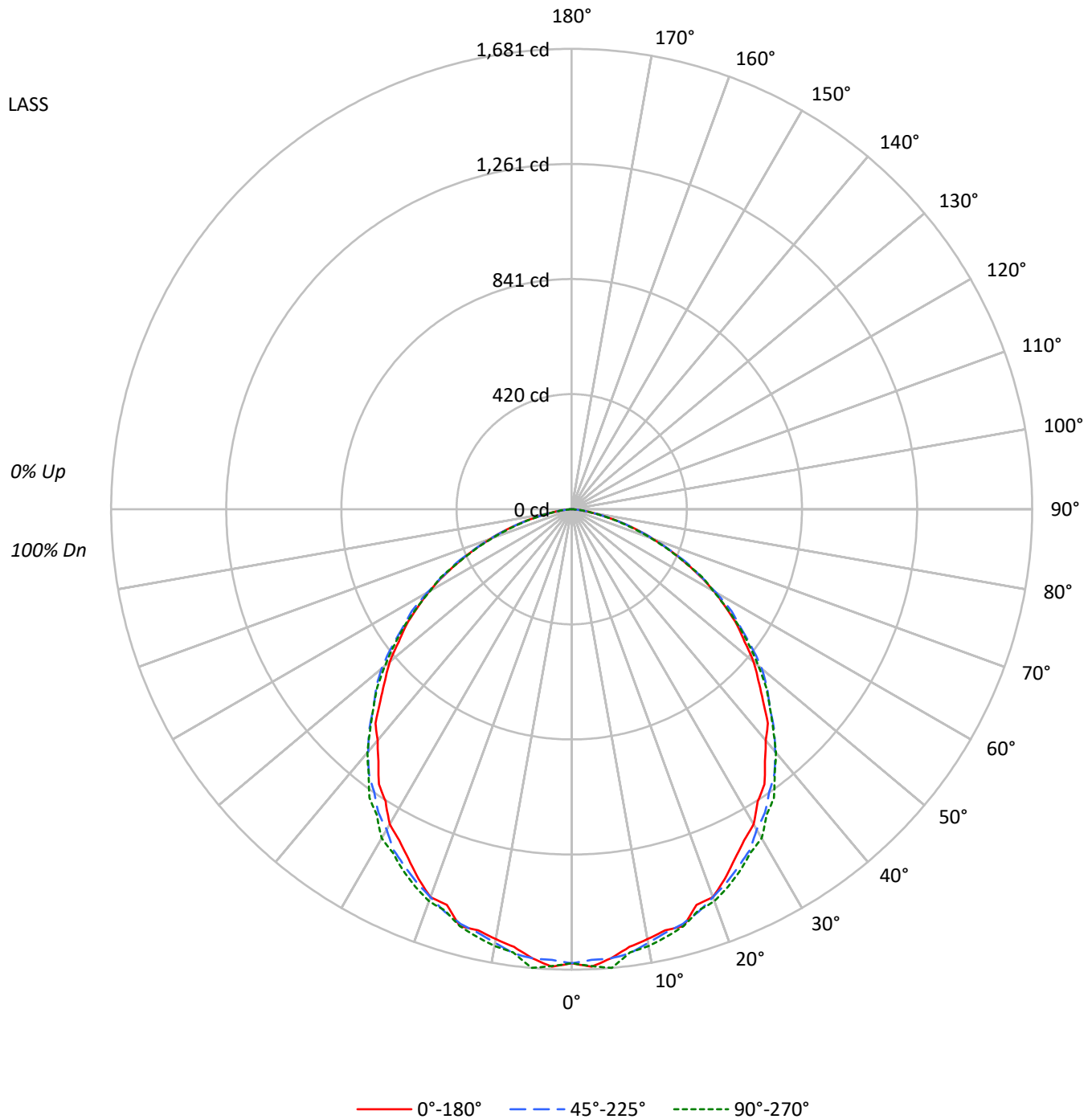
Lumens per Lamp: N/A
Luminaire Lumens: 4177.0 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4460	4460	4460
5°	4445	4447	4541
10°	4355	4393	4424
15°	4389	4366	4390
20°	4315	4315	4361
25°	4183	4274	4321
30°	4125	4198	4309
35°	4028	4133	4226
40°	3871	4058	4076
45°	3754	3888	3894
50°	3631	3795	3722
55°	3460	3527	3502
60°	3235	3267	3209
65°	2884	2958	2864
70°	2475	2483	2415
75°	1960	1956	1880
80°	1313	1277	1227
85°	713	707	661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3988 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.9	3.7
10°-20°	441.8	10.6
20°-30°	662.0	15.8
30°-40°	784.5	18.8
40°-50°	786.0	18.8
50°-60°	667.2	16.0
60°-70°	449.8	10.8
70°-80°	197.6	4.7
80°-90°	32.1	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°	1259.7	30.2
0°-40°	2044.2	48.9
0°-60°	3497.4	83.7
0°-90°	4177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1657	1657	1657	1657	1657	
5°	1646	1642	1646	1641	1681	155
15°	1576	1557	1567	1575	1576	439
25°	1409	1416	1440	1458	1455	651
35°	1226	1230	1258	1287	1286	761
45°	986	1005	1022	1048	1023	763
55°	737	732	752	747	746	656
65°	453	447	465	447	450	451
75°	188	185	188	175	181	202
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1657.3	1657.3	1657.3	1657.3	1657.3
2.5°	1671.7	1659.0	1647.3	1661.0	1669.3
5°	1645.6	1641.7	1646.2	1641.3	1680.9
7.5°	1611.7	1626.5	1635.1	1629.7	1632.1
10°	1593.8	1588.6	1607.7	1621.0	1619.0
12.5°	1574.5	1582.2	1583.3	1597.6	1598.9
15°	1575.6	1557.4	1567.0	1575.2	1575.8
17.5°	1514.4	1534.1	1540.7	1559.3	1536.2
20°	1506.9	1492.6	1506.9	1525.9	1522.9
22.5°	1460.9	1444.8	1475.7	1492.6	1491.5
25°	1408.7	1416.4	1439.5	1458.3	1455.3
27.5°	1362.9	1371.9	1404.8	1430.7	1414.0
30°	1327.6	1323.1	1350.9	1374.0	1386.8
32.5°	1264.4	1280.7	1313.2	1336.1	1323.9
35°	1226.1	1229.8	1258.2	1287.3	1286.5
37.5°	1159.2	1176.1	1216.1	1224.2	1216.7
40°	1102.0	1118.9	1155.1	1163.9	1160.2
42.5°	1059.9	1062.9	1093.9	1104.0	1087.9
45°	986.5	1004.9	1021.6	1047.9	1023.1
47.5°	924.0	932.6	968.5	975.6	962.5
50°	867.3	870.3	906.4	897.7	889.1
52.5°	796.0	808.7	829.0	827.3	817.2
55°	737.4	732.5	751.7	746.6	746.4
57.5°	667.0	675.6	691.4	683.3	670.2
60°	601.1	601.3	607.1	597.9	596.2
62.5°	527.7	530.3	531.5	520.2	538.6
65°	453.0	447.0	464.6	446.8	449.8
67.5°	384.3	387.3	385.6	374.5	378.8
70°	314.6	318.4	315.6	303.0	306.9
72.5°	250.8	246.1	249.1	233.2	240.5
75°	188.5	184.7	188.1	174.8	180.8
77.5°	128.4	131.4	129.2	122.2	126.3
80°	84.7	82.4	82.4	78.3	79.2
82.5°	49.4	47.1	46.4	45.2	47.1
85°	23.1	22.5	22.9	22.3	21.4
87.5°	8.3	8.6	8.6	8.1	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)