

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: P590556

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590556
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 4219.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

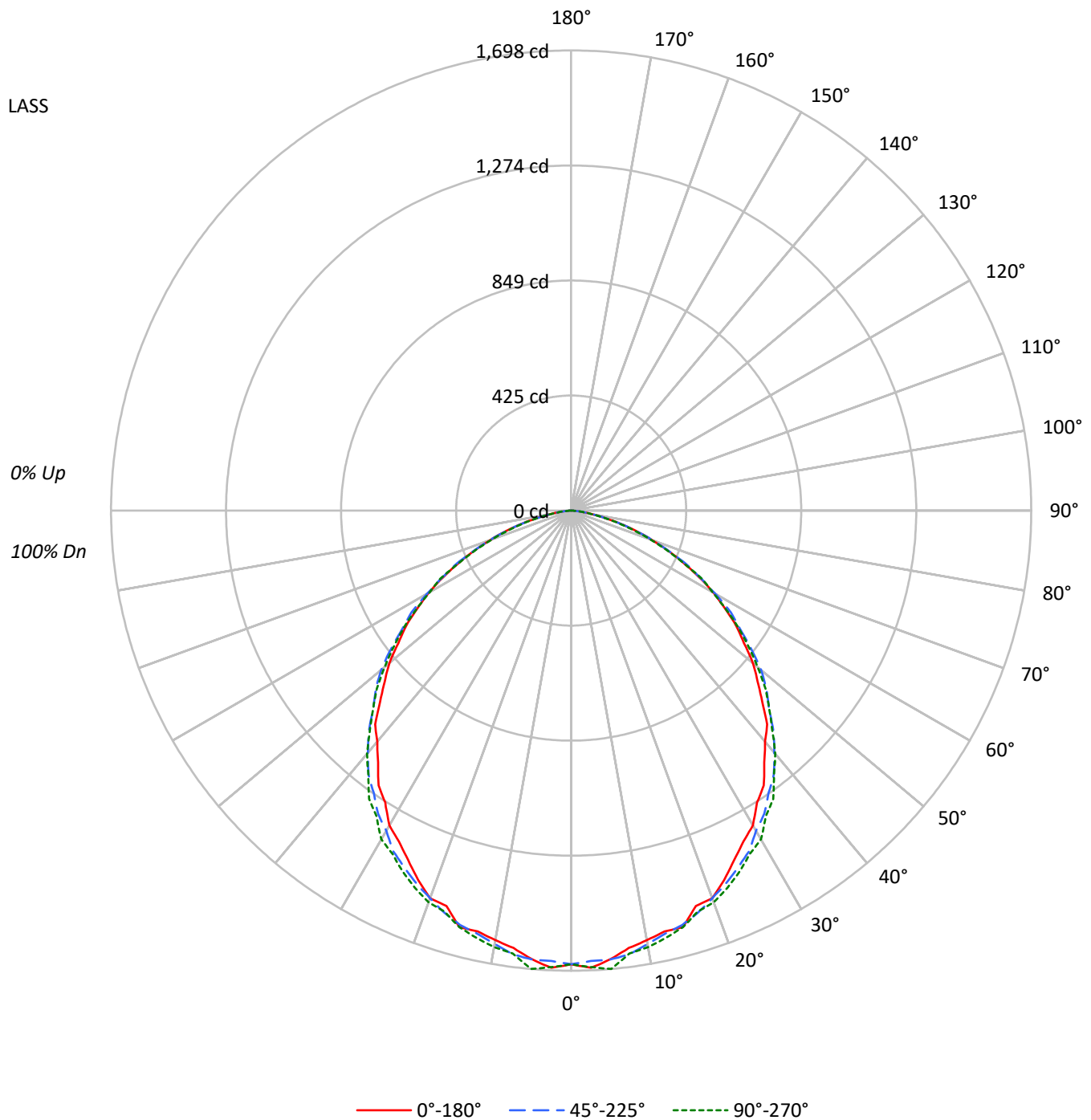
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4505	4505	4505
5°	4490	4492	4586
10°	4399	4437	4468
15°	4433	4410	4434
20°	4359	4359	4405
25°	4225	4317	4365
30°	4167	4240	4353
35°	4069	4175	4269
40°	3910	4098	4117
45°	3792	3927	3933
50°	3667	3833	3760
55°	3494	3562	3537
60°	3267	3300	3241
65°	2914	2988	2893
70°	2500	2508	2438
75°	1980	1975	1899
80°	1327	1289	1240
85°	719	713	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4028 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.5	3.7
10°-20°	446.3	10.6
20°-30°	668.6	15.8
30°-40°	792.4	18.8
40°-50°	793.9	18.8
50°-60°	673.9	16.0
60°-70°	454.3	10.8
70°-80°	199.6	4.7
80°-90°	32.4	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°	1272.3	30.2
0°-40°	2064.8	48.9
0°-60°	3532.6	83.7
0°-90°	4219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4219.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1662	1658	1663	1658	1698	157
15°	1591	1573	1583	1591	1592	443
25°	1423	1431	1454	1473	1470	658
35°	1238	1242	1271	1300	1299	769
45°	996	1015	1032	1058	1033	771
55°	745	740	759	754	754	663
65°	458	452	469	451	454	455
75°	190	186	190	177	183	204
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1674.0	1674.0	1674.0	1674.0	1674.0
2.5°	1688.5	1675.7	1663.8	1677.7	1686.1
5°	1662.1	1658.2	1662.8	1657.8	1697.8
7.5°	1628.0	1642.9	1651.5	1646.1	1648.5
10°	1609.8	1604.6	1623.8	1637.2	1635.3
12.5°	1590.3	1598.1	1599.2	1613.7	1615.0
15°	1591.4	1573.1	1582.8	1591.0	1591.6
17.5°	1529.6	1549.5	1556.2	1575.0	1551.7
20°	1522.0	1507.6	1522.0	1541.3	1538.3
22.5°	1475.6	1459.4	1490.5	1507.6	1506.5
25°	1422.8	1430.6	1454.0	1473.0	1470.0
27.5°	1376.6	1385.7	1418.9	1445.1	1428.2
30°	1340.9	1336.4	1364.5	1387.8	1400.8
32.5°	1277.2	1293.6	1326.4	1349.6	1337.2
35°	1238.5	1242.1	1270.9	1300.3	1299.4
37.5°	1170.8	1187.9	1228.3	1236.5	1229.0
40°	1113.1	1130.2	1166.7	1175.6	1171.9
42.5°	1070.5	1073.6	1104.9	1115.1	1098.8
45°	996.4	1015.0	1031.8	1058.4	1033.4
47.5°	933.3	941.9	978.2	985.4	972.2
50°	876.0	879.0	915.6	906.7	898.1
52.5°	804.0	816.8	837.3	835.6	825.4
55°	744.8	739.8	759.3	754.1	753.9
57.5°	673.7	682.3	698.3	690.1	676.9
60°	607.1	607.3	613.2	603.9	602.2
62.5°	533.0	535.6	536.9	525.4	544.0
65°	457.6	451.5	469.2	451.3	454.3
67.5°	388.2	391.2	389.5	378.2	382.6
70°	317.7	321.6	318.8	306.1	309.9
72.5°	253.3	248.6	251.6	235.6	242.9
75°	190.4	186.5	190.0	176.6	182.6
77.5°	129.7	132.7	130.5	123.4	127.5
80°	85.6	83.2	83.2	79.1	80.0
82.5°	49.9	47.6	46.9	45.6	47.6
85°	23.3	22.7	23.1	22.5	21.6
87.5°	8.4	8.6	8.6	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)