

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: P590201

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590201
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-LD4-2HI-50-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4151.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

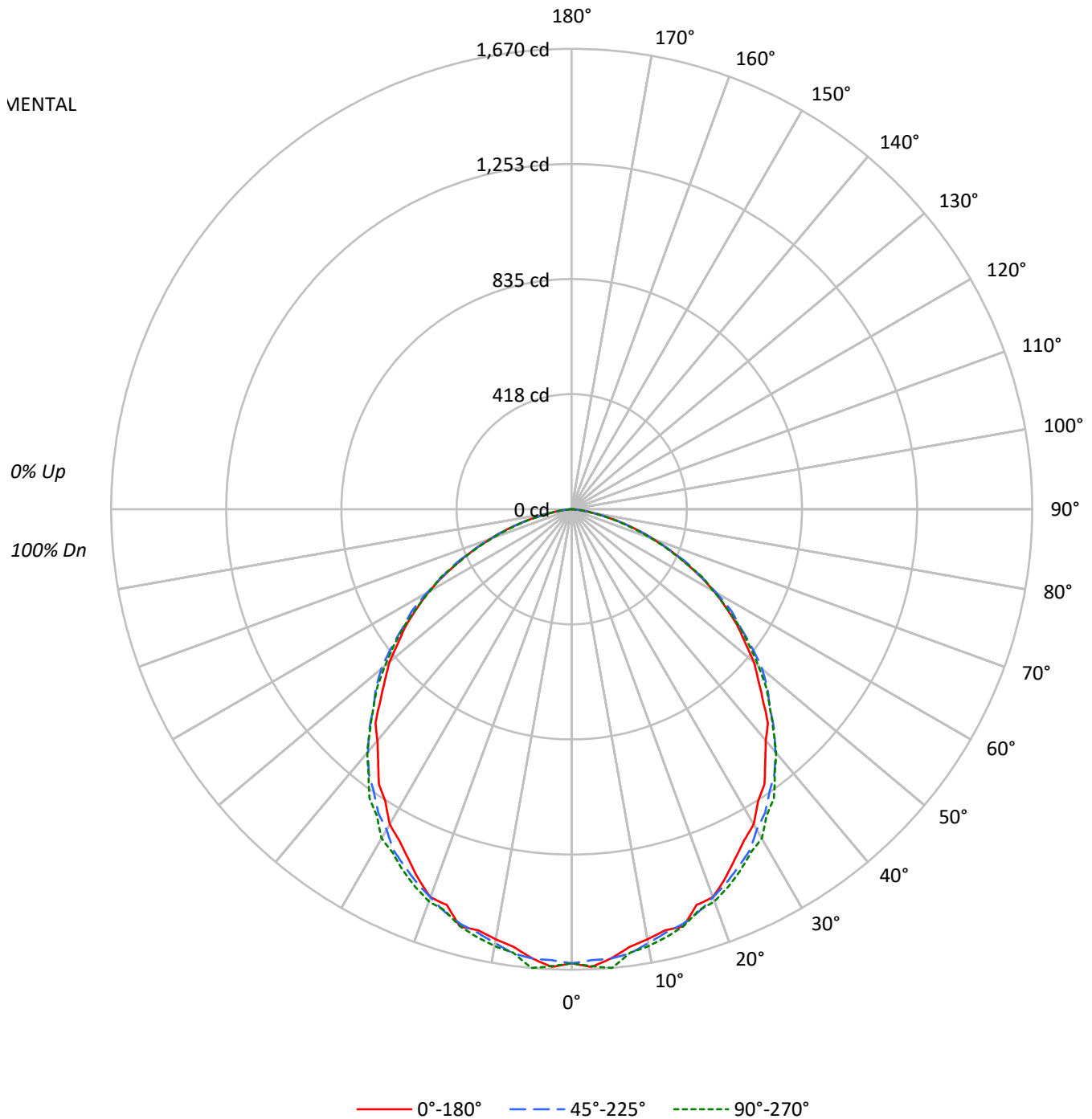
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4432	4432	4432
5°	4417	4419	4512
10°	4328	4366	4396
15°	4362	4338	4363
20°	4288	4288	4334
25°	4157	4247	4294
30°	4099	4172	4282
35°	4003	4108	4200
40°	3847	4032	4050
45°	3731	3863	3869
50°	3608	3771	3699
55°	3438	3505	3480
60°	3215	3247	3189
65°	2867	2940	2846
70°	2460	2468	2399
75°	1947	1943	1868
80°	1305	1269	1220
85°	710	704	658

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3963 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	3.7
10°-20°	439.1	10.6
20°-30°	657.8	15.8
30°-40°	779.7	18.8
40°-50°	781.1	18.8
50°-60°	663.0	16.0
60°-70°	447.0	10.8
70°-80°	196.4	4.7
80°-90°	31.9	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°	1251.8	30.2
0°-40°	2031.5	48.9
0°-60°	3475.6	83.7
0°-90°	4151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1647	1647	1647	1647	1647	
5°	1635	1632	1636	1631	1670	154
15°	1566	1548	1557	1565	1566	436
25°	1400	1408	1430	1449	1446	647
35°	1218	1222	1250	1279	1278	757
45°	980	999	1015	1041	1017	758
55°	733	728	747	742	742	652
65°	450	444	462	444	447	448
75°	187	184	187	174	180	201
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°	1647.0	1647.0	1647.0	1647.0	1647.0
2.5°	1661.3	1648.7	1637.0	1650.6	1658.9
5°	1635.3	1631.5	1636.0	1631.1	1670.4
7.5°	1601.7	1616.4	1624.9	1619.6	1621.9
10°	1583.9	1578.7	1597.7	1610.9	1608.9
12.5°	1564.7	1572.4	1573.4	1587.7	1589.0
15°	1565.8	1547.7	1557.3	1565.4	1566.0
17.5°	1505.0	1524.5	1531.1	1549.6	1526.6
20°	1497.5	1483.3	1497.5	1516.4	1513.5
22.5°	1451.8	1435.8	1466.5	1483.3	1482.2
25°	1399.9	1407.6	1430.5	1449.2	1446.3
27.5°	1354.4	1363.3	1396.1	1421.8	1405.2
30°	1319.3	1314.8	1342.5	1365.5	1378.2
32.5°	1256.6	1272.7	1305.1	1327.8	1315.7
35°	1218.5	1222.1	1250.4	1279.3	1278.5
37.5°	1152.0	1168.8	1208.5	1216.6	1209.2
40°	1095.2	1112.0	1147.9	1156.6	1153.0
42.5°	1053.3	1056.3	1087.1	1097.1	1081.1
45°	980.3	998.6	1015.2	1041.4	1016.7
47.5°	918.2	926.7	962.5	969.5	956.5
50°	861.9	864.9	900.8	892.1	883.6
52.5°	791.1	803.6	823.8	822.1	812.1
55°	732.8	727.9	747.1	742.0	741.7
57.5°	662.8	671.4	687.1	679.0	666.0
60°	597.3	597.6	603.3	594.2	592.5
62.5°	524.4	527.0	528.2	517.0	535.3
65°	450.2	444.2	461.7	444.0	447.0
67.5°	381.9	384.9	383.2	372.1	376.4
70°	312.6	316.4	313.7	301.1	304.9
72.5°	249.2	244.6	247.5	231.8	239.0
75°	187.3	183.5	186.9	173.7	179.7
77.5°	127.6	130.6	128.4	121.4	125.5
80°	84.2	81.9	81.9	77.8	78.7
82.5°	49.1	46.8	46.1	44.9	46.8
85°	23.0	22.3	22.8	22.1	21.3
87.5°	8.3	8.5	8.5	8.1	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)