

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: P590169

Luminaire Tested: FSR-24-2-LD4-2HI-40-UNV-80-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590169
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-40-UNV-80-88-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4082.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

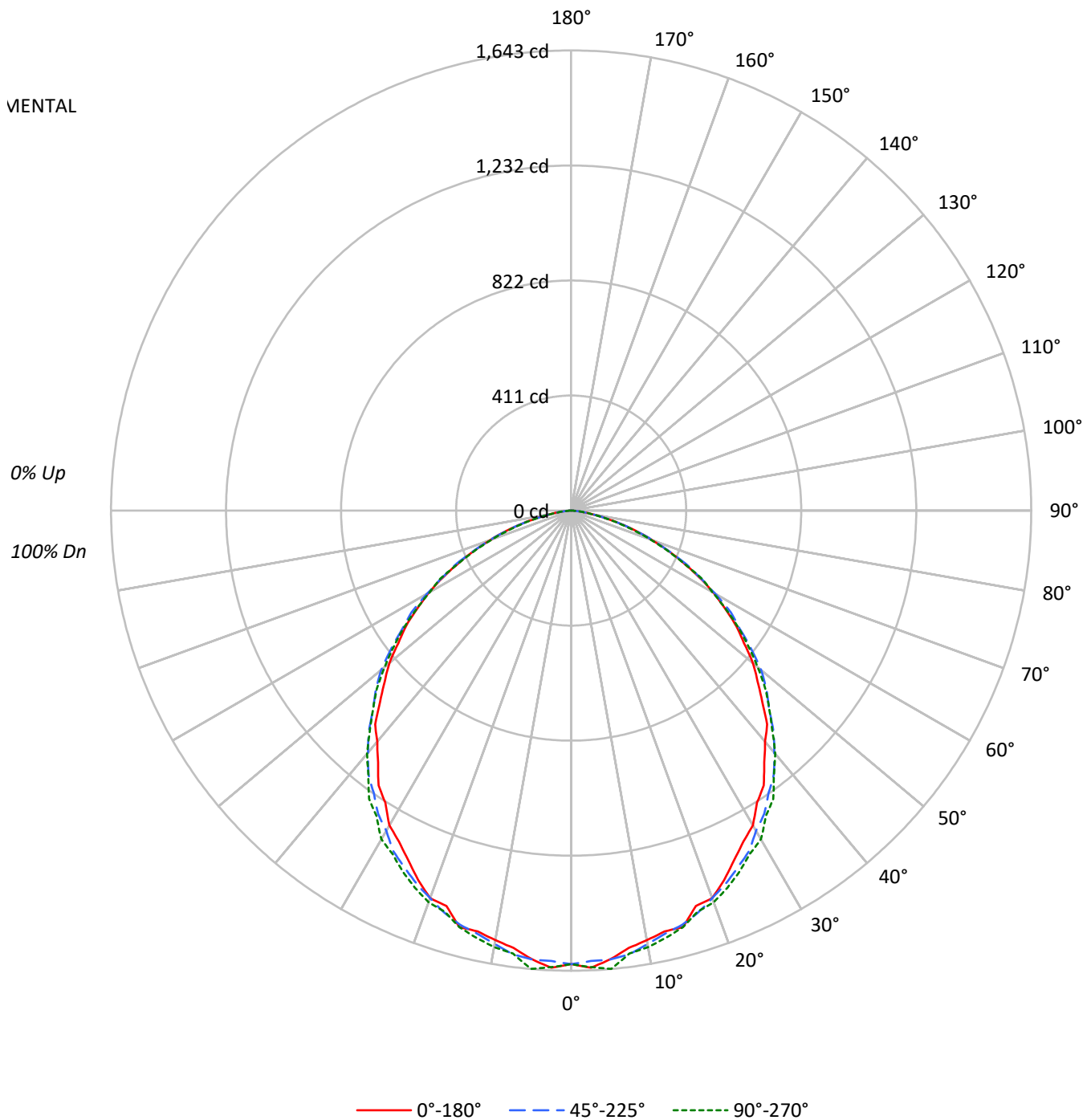
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4358	4358	4358
5°	4344	4346	4437
10°	4256	4293	4323
15°	4290	4266	4290
20°	4217	4217	4262
25°	4087	4177	4223
30°	4031	4102	4211
35°	3937	4039	4130
40°	3783	3965	3983
45°	3669	3799	3805
50°	3548	3708	3638
55°	3381	3446	3422
60°	3161	3193	3136
65°	2819	2891	2799
70°	2419	2427	2360
75°	1915	1911	1837
80°	1283	1247	1199
85°	698	692	645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3897 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.4	3.7
10°-20°	431.8	10.6
20°-30°	646.9	15.8
30°-40°	766.7	18.8
40°-50°	768.1	18.8
50°-60°	652.0	16.0
60°-70°	439.6	10.8
70°-80°	193.2	4.7
80°-90°	31.4	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°	1231.0	30.2
0°-40°	1997.7	48.9
0°-60°	3417.9	83.7
0°-90°	4082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1608	1604	1609	1604	1643	152
15°	1540	1522	1531	1539	1540	429
25°	1377	1384	1407	1425	1422	636
35°	1198	1202	1230	1258	1257	744
45°	964	982	998	1024	1000	746
55°	721	716	735	730	729	641
65°	443	437	454	437	440	440
75°	184	180	184	171	177	197
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1619.6	1619.6	1619.6	1619.6	1619.6
2.5°	1633.6	1621.3	1609.8	1623.2	1631.3
5°	1608.1	1604.4	1608.8	1604.0	1642.6
7.5°	1575.1	1589.5	1597.9	1592.7	1595.0
10°	1557.5	1552.5	1571.1	1584.1	1582.2
12.5°	1538.7	1546.2	1547.3	1561.3	1562.5
15°	1539.8	1522.0	1531.4	1539.3	1540.0
17.5°	1479.9	1499.2	1505.7	1523.9	1501.3
20°	1472.6	1458.6	1472.6	1491.2	1488.3
22.5°	1427.7	1412.0	1442.1	1458.6	1457.6
25°	1376.6	1384.2	1406.8	1425.2	1422.2
27.5°	1331.9	1340.7	1372.9	1398.2	1381.9
30°	1297.4	1293.0	1320.2	1342.8	1355.3
32.5°	1235.7	1251.6	1283.4	1305.7	1293.8
35°	1198.3	1201.8	1229.6	1258.1	1257.2
37.5°	1132.8	1149.3	1188.4	1196.4	1189.1
40°	1077.0	1093.5	1128.8	1137.4	1133.8
42.5°	1035.8	1038.7	1069.0	1078.9	1063.2
45°	964.0	982.0	998.3	1024.1	999.8
47.5°	903.0	911.3	946.5	953.4	940.6
50°	847.6	850.5	885.8	877.3	868.9
52.5°	777.9	790.3	810.1	808.5	798.6
55°	720.6	715.8	734.6	729.6	729.4
57.5°	651.8	660.2	675.7	667.7	655.0
60°	587.4	587.6	593.3	584.3	582.6
62.5°	515.7	518.2	519.5	508.4	526.4
65°	442.7	436.9	454.0	436.6	439.6
67.5°	375.6	378.5	376.8	366.0	370.1
70°	307.4	311.2	308.5	296.1	299.9
72.5°	245.1	240.5	243.4	227.9	235.1
75°	184.2	180.5	183.8	170.9	176.7
77.5°	125.5	128.4	126.3	119.4	123.4
80°	82.8	80.5	80.5	76.5	77.4
82.5°	48.3	46.0	45.4	44.1	46.0
85°	22.6	22.0	22.4	21.7	20.9
87.5°	8.2	8.4	8.4	7.9	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)