

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: P590209

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590209
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3944.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

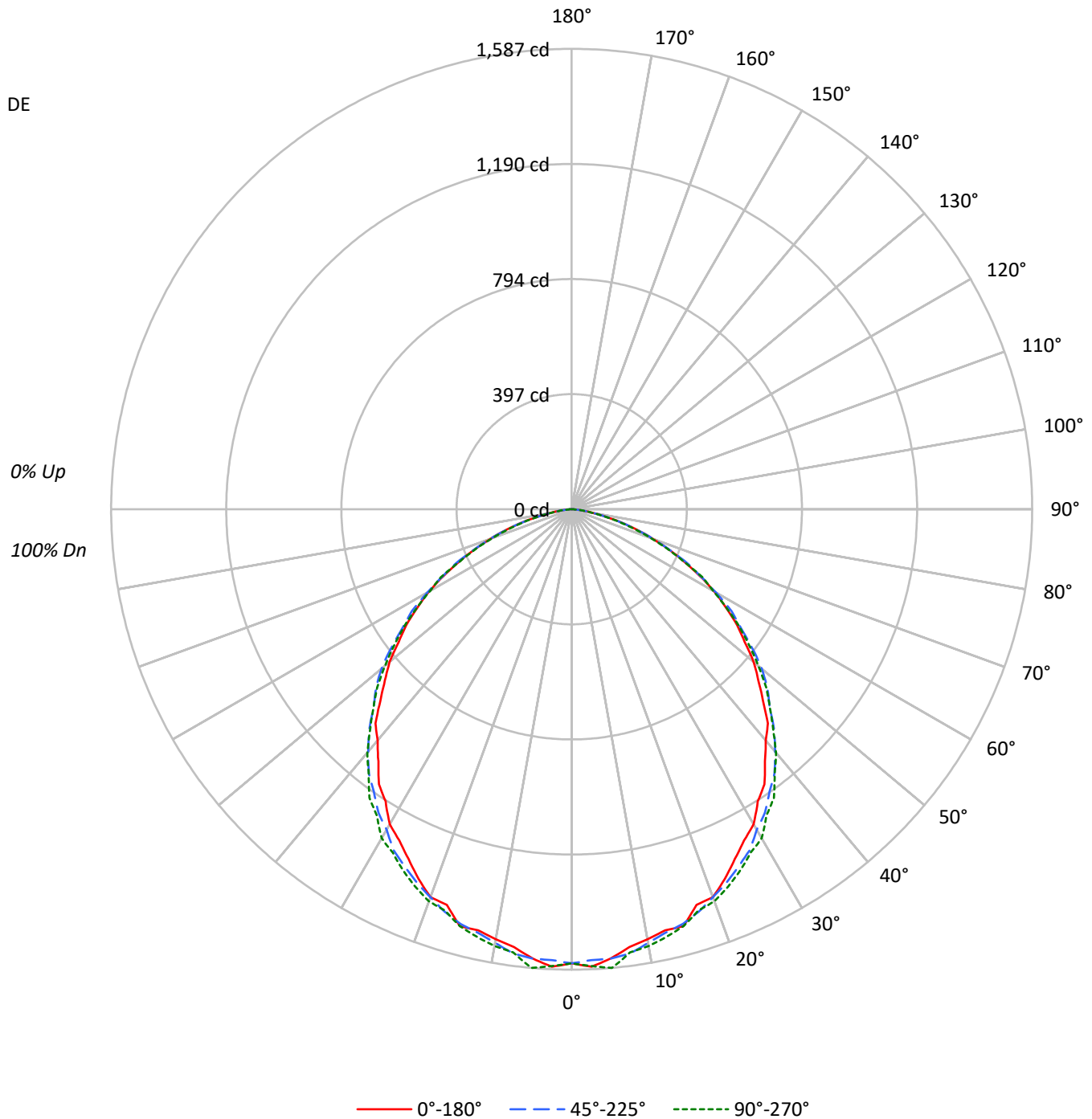
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4211	4211	4211
5°	4197	4199	4287
10°	4112	4148	4177
15°	4145	4122	4145
20°	4074	4074	4118
25°	3949	4036	4080
30°	3895	3963	4069
35°	3803	3903	3990
40°	3655	3831	3848
45°	3545	3671	3676
50°	3428	3583	3514
55°	3267	3330	3307
60°	3055	3085	3030
65°	2723	2793	2704
70°	2337	2345	2279
75°	1851	1847	1775
80°	1240	1206	1159
85°	673	667	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	3.7
10°-20°	417.2	10.6
20°-30°	625.0	15.8
30°-40°	740.8	18.8
40°-50°	742.2	18.8
50°-60°	630.0	16.0
60°-70°	424.7	10.8
70°-80°	186.6	4.7
80°-90°	30.3	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°	1189.4	30.2
0°-40°	1930.2	48.9
0°-60°	3302.3	83.7
0°-90°	3944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1554	1550	1554	1550	1587	146
15°	1488	1470	1480	1487	1488	414
25°	1330	1337	1359	1377	1374	615
35°	1158	1161	1188	1216	1215	719
45°	932	949	965	989	966	721
55°	696	692	710	705	705	619
65°	428	422	439	422	425	425
75°	178	174	178	165	171	191
85°	22	21	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1564.9	1564.9	1564.9	1564.9	1564.9
2.5°	1578.4	1566.5	1555.4	1568.3	1576.2
5°	1553.8	1550.1	1554.4	1549.7	1587.1
7.5°	1521.8	1535.8	1543.9	1538.8	1541.0
10°	1504.9	1500.0	1518.0	1530.5	1528.7
12.5°	1486.7	1494.0	1495.0	1508.5	1509.7
15°	1487.7	1470.5	1479.6	1487.3	1487.9
17.5°	1429.9	1448.5	1454.8	1472.3	1450.5
20°	1422.8	1409.3	1422.8	1440.8	1438.0
22.5°	1379.4	1364.2	1393.3	1409.3	1408.3
25°	1330.1	1337.4	1359.2	1377.0	1374.1
27.5°	1286.9	1295.3	1326.5	1350.9	1335.1
30°	1253.5	1249.3	1275.5	1297.4	1309.5
32.5°	1193.9	1209.3	1240.0	1261.6	1250.1
35°	1157.7	1161.2	1188.1	1215.5	1214.7
37.5°	1094.5	1110.5	1148.3	1155.9	1148.9
40°	1040.6	1056.5	1090.7	1099.0	1095.5
42.5°	1000.8	1003.6	1032.9	1042.4	1027.2
45°	931.5	948.8	964.6	989.4	966.0
47.5°	872.5	880.5	914.5	921.1	908.8
50°	818.9	821.7	855.9	847.6	839.5
52.5°	751.6	763.5	782.7	781.1	771.6
55°	696.3	691.6	709.8	705.0	704.8
57.5°	629.8	637.9	652.8	645.1	632.8
60°	567.6	567.8	573.2	564.5	562.9
62.5°	498.3	500.7	501.9	491.2	508.6
65°	427.7	422.1	438.7	421.9	424.7
67.5°	362.9	365.7	364.1	353.6	357.6
70°	297.0	300.7	298.0	286.1	289.7
72.5°	236.8	232.4	235.2	220.2	227.1
75°	178.0	174.4	177.6	165.1	170.7
77.5°	121.2	124.1	122.0	115.4	119.2
80°	80.0	77.8	77.8	74.0	74.8
82.5°	46.7	44.5	43.8	42.6	44.5
85°	21.8	21.2	21.6	21.0	20.2
87.5°	7.9	8.1	8.1	7.7	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)