

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: P590144

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590144
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-35-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4264.0 lumens
Efficiency: N/A
Efficacy: 98.7 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

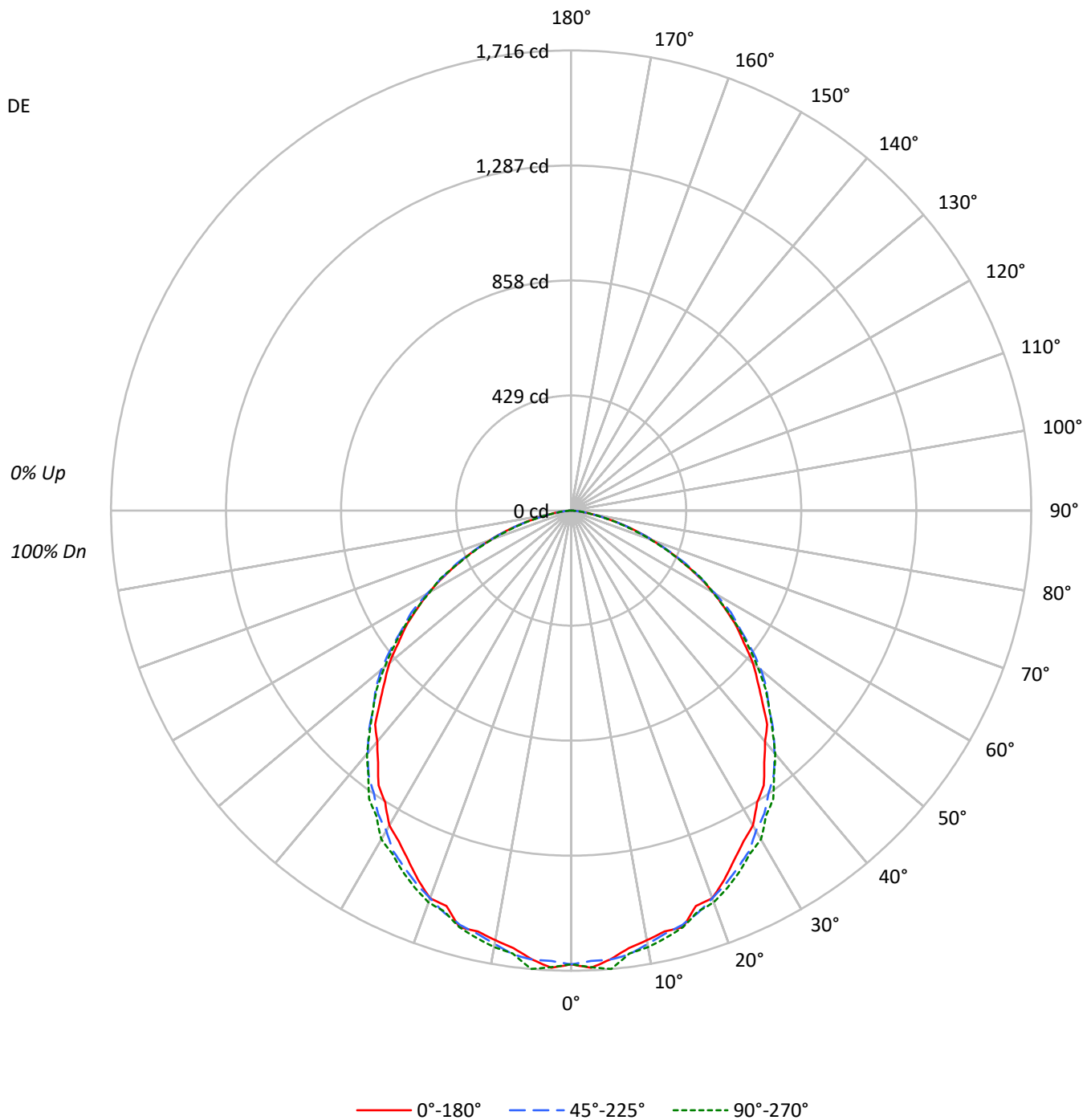
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4553	4553	4553
5°	4538	4539	4635
10°	4446	4485	4516
15°	4481	4457	4481
20°	4405	4405	4452
25°	4270	4363	4411
30°	4211	4285	4399
35°	4112	4219	4314
40°	3952	4142	4161
45°	3832	3969	3975
50°	3707	3874	3800
55°	3532	3600	3575
60°	3302	3335	3275
65°	2944	3019	2924
70°	2526	2535	2464
75°	2000	1996	1919
80°	1340	1303	1252
85°	729	722	673

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4071 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.1	3.7
10°-20°	451.0	10.6
20°-30°	675.7	15.8
30°-40°	800.9	18.8
40°-50°	802.4	18.8
50°-60°	681.1	16.0
60°-70°	459.2	10.8
70°-80°	201.8	4.7
80°-90°	32.8	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°	1285.9	30.2
0°-40°	2086.8	48.9
0°-60°	3570.3	83.7
0°-90°	4264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1692	1692	1692	1692	1692	
5°	1680	1676	1680	1676	1716	158
15°	1608	1590	1600	1608	1609	448
25°	1438	1446	1470	1489	1486	665
35°	1252	1255	1284	1314	1313	777
45°	1007	1026	1043	1070	1044	779
55°	753	748	767	762	762	670
65°	462	456	474	456	459	460
75°	192	188	192	178	185	206
85°	24	23	23	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1691.8	1691.8	1691.8	1691.8	1691.8
2.5°	1706.5	1693.6	1681.6	1695.6	1704.1
5°	1679.8	1675.9	1680.5	1675.5	1715.9
7.5°	1645.3	1660.4	1669.1	1663.7	1666.1
10°	1627.0	1621.7	1641.2	1654.7	1652.7
12.5°	1607.3	1615.2	1616.3	1630.9	1632.2
15°	1608.4	1589.8	1599.7	1608.0	1608.6
17.5°	1545.9	1566.0	1572.8	1591.8	1568.2
20°	1538.3	1523.6	1538.3	1557.7	1554.7
22.5°	1491.3	1474.9	1506.4	1523.6	1522.6
25°	1438.0	1445.9	1469.5	1488.7	1485.6
27.5°	1391.3	1400.4	1434.1	1460.5	1443.5
30°	1355.2	1350.6	1379.0	1402.6	1415.7
32.5°	1290.8	1307.4	1340.6	1364.0	1351.5
35°	1251.7	1255.4	1284.4	1314.2	1313.3
37.5°	1183.3	1200.6	1241.4	1249.7	1242.1
40°	1125.0	1142.2	1179.2	1188.1	1184.4
42.5°	1082.0	1085.0	1116.7	1127.0	1110.6
45°	1007.0	1025.8	1042.9	1069.7	1044.4
47.5°	943.2	952.0	988.7	995.9	982.6
50°	885.4	888.4	925.3	916.4	907.6
52.5°	812.6	825.5	846.3	844.5	834.2
55°	752.8	747.7	767.4	762.2	761.9
57.5°	680.9	689.6	705.8	697.5	684.2
60°	613.6	613.8	619.7	610.3	608.6
62.5°	538.7	541.3	542.6	531.0	549.8
65°	462.4	456.3	474.2	456.1	459.2
67.5°	392.3	395.4	393.6	382.3	386.6
70°	321.1	325.0	322.2	309.3	313.2
72.5°	256.0	251.2	254.3	238.1	245.5
75°	192.4	188.5	192.0	178.5	184.6
77.5°	131.1	134.1	131.9	124.7	128.9
80°	86.5	84.1	84.1	80.0	80.8
82.5°	50.5	48.1	47.4	46.1	48.1
85°	23.6	22.9	23.4	22.7	21.8
87.5°	8.5	8.7	8.7	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)