

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: P590217

Luminaire Tested: FSR-24-2-LD4-2HI-50-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590217
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-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 3861.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

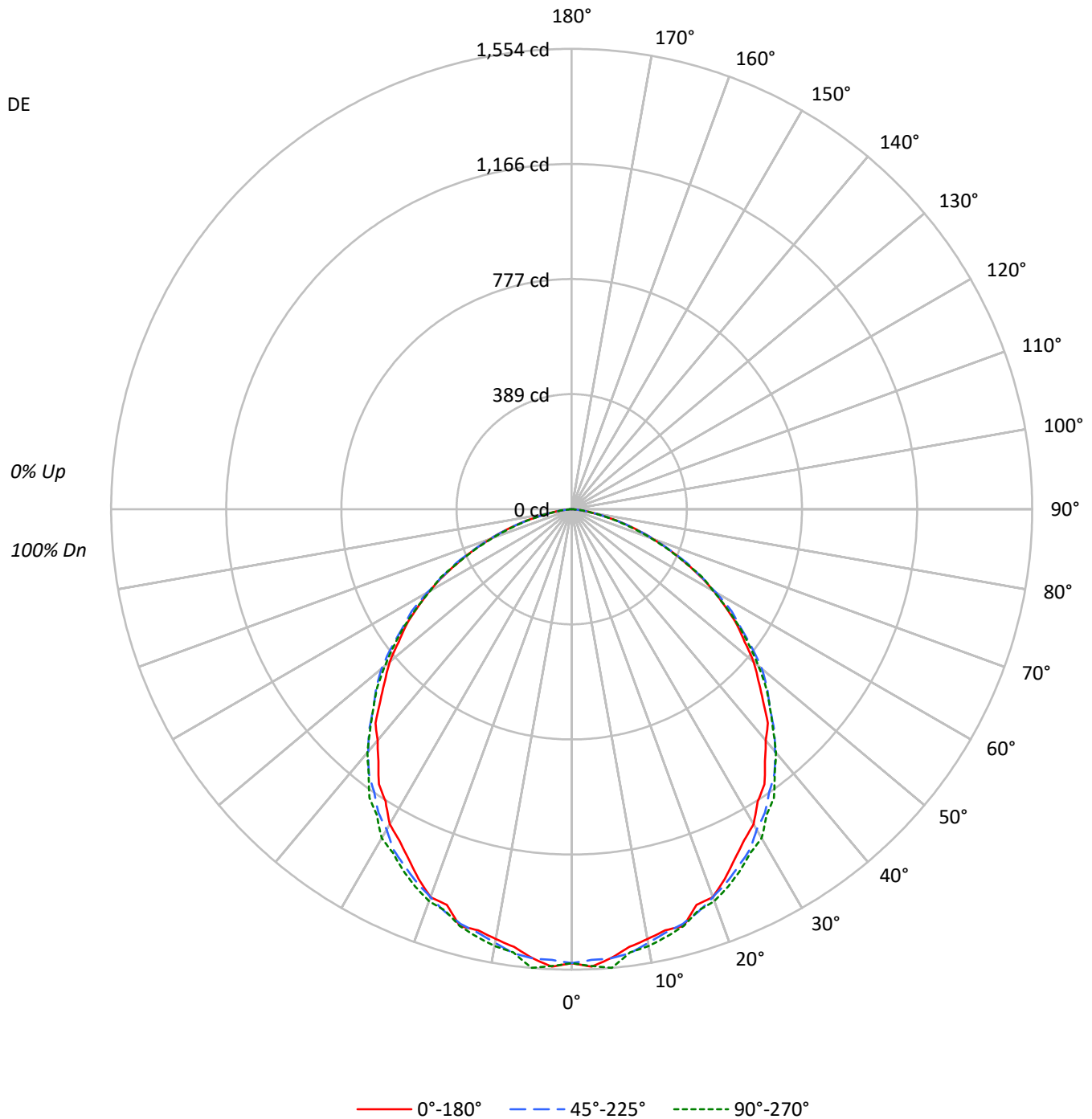
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	4122	4122	4122
5°	4109	4111	4197
10°	4026	4061	4089
15°	4057	4035	4058
20°	3989	3989	4031
25°	3866	3951	3994
30°	3813	3880	3983
35°	3723	3821	3907
40°	3579	3751	3768
45°	3470	3594	3599
50°	3356	3508	3441
55°	3198	3260	3237
60°	2990	3020	2966
65°	2666	2734	2648
70°	2288	2296	2231
75°	1812	1808	1737
80°	1213	1181	1134
85°	661	655	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3686 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	3.7
10°-20°	408.4	10.6
20°-30°	611.9	15.8
30°-40°	725.2	18.8
40°-50°	726.5	18.8
50°-60°	616.7	16.0
60°-70°	415.8	10.8
70°-80°	182.7	4.7
80°-90°	29.7	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°	1164.4	30.2
0°-40°	1889.6	48.9
0°-60°	3232.8	83.7
0°-90°	3861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3861.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1532	1532	1532	1532	1532	
5°	1521	1518	1522	1517	1554	143
15°	1456	1440	1448	1456	1457	406
25°	1302	1309	1331	1348	1345	602
35°	1133	1137	1163	1190	1189	704
45°	912	929	944	969	946	705
55°	682	677	695	690	690	606
65°	419	413	429	413	416	416
75°	174	171	174	162	167	187
85°	21	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1531.9	1531.9	1531.9	1531.9	1531.9
2.5°	1545.2	1533.5	1522.7	1535.3	1543.0
5°	1521.1	1517.5	1521.7	1517.1	1553.7
7.5°	1489.8	1503.5	1511.4	1506.4	1508.6
10°	1473.2	1468.5	1486.1	1498.3	1496.5
12.5°	1455.4	1462.5	1463.5	1476.8	1477.9
15°	1456.4	1439.6	1448.5	1456.0	1456.6
17.5°	1399.8	1418.0	1424.1	1441.4	1420.0
20°	1392.9	1379.6	1392.9	1410.5	1407.7
22.5°	1350.4	1335.5	1364.0	1379.6	1378.7
25°	1302.1	1309.2	1330.6	1348.0	1345.2
27.5°	1259.8	1268.1	1298.5	1322.5	1307.1
30°	1227.1	1223.0	1248.7	1270.1	1281.9
32.5°	1168.8	1183.8	1213.9	1235.1	1223.8
35°	1133.4	1136.7	1163.1	1190.0	1189.2
37.5°	1071.5	1087.1	1124.1	1131.6	1124.7
40°	1018.7	1034.3	1067.7	1075.8	1072.5
42.5°	979.7	982.5	1011.1	1020.4	1005.6
45°	911.8	928.9	944.3	968.6	945.7
47.5°	854.1	862.0	895.2	901.8	889.7
50°	801.7	804.4	837.9	829.8	821.9
52.5°	735.8	747.5	766.3	764.7	755.4
55°	681.6	677.1	694.9	690.1	689.9
57.5°	616.5	624.4	639.1	631.6	619.5
60°	555.6	555.8	561.2	552.6	551.1
62.5°	487.8	490.1	491.3	480.8	497.9
65°	418.7	413.2	429.4	413.0	415.8
67.5°	355.2	358.0	356.4	346.1	350.1
70°	290.8	294.3	291.8	280.1	283.6
72.5°	231.8	227.5	230.2	215.6	222.3
75°	174.3	170.7	173.9	161.6	167.1
77.5°	118.7	121.4	119.5	112.9	116.7
80°	78.3	76.2	76.2	72.4	73.2
82.5°	45.7	43.5	42.9	41.7	43.5
85°	21.4	20.8	21.2	20.6	19.8
87.5°	7.7	7.9	7.9	7.5	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)