

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: P590185

Luminaire Tested: FSR-24-2-LD4-2HI-40-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590185
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-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3796.0 lumens
Efficiency: N/A
Efficacy: 87.9 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

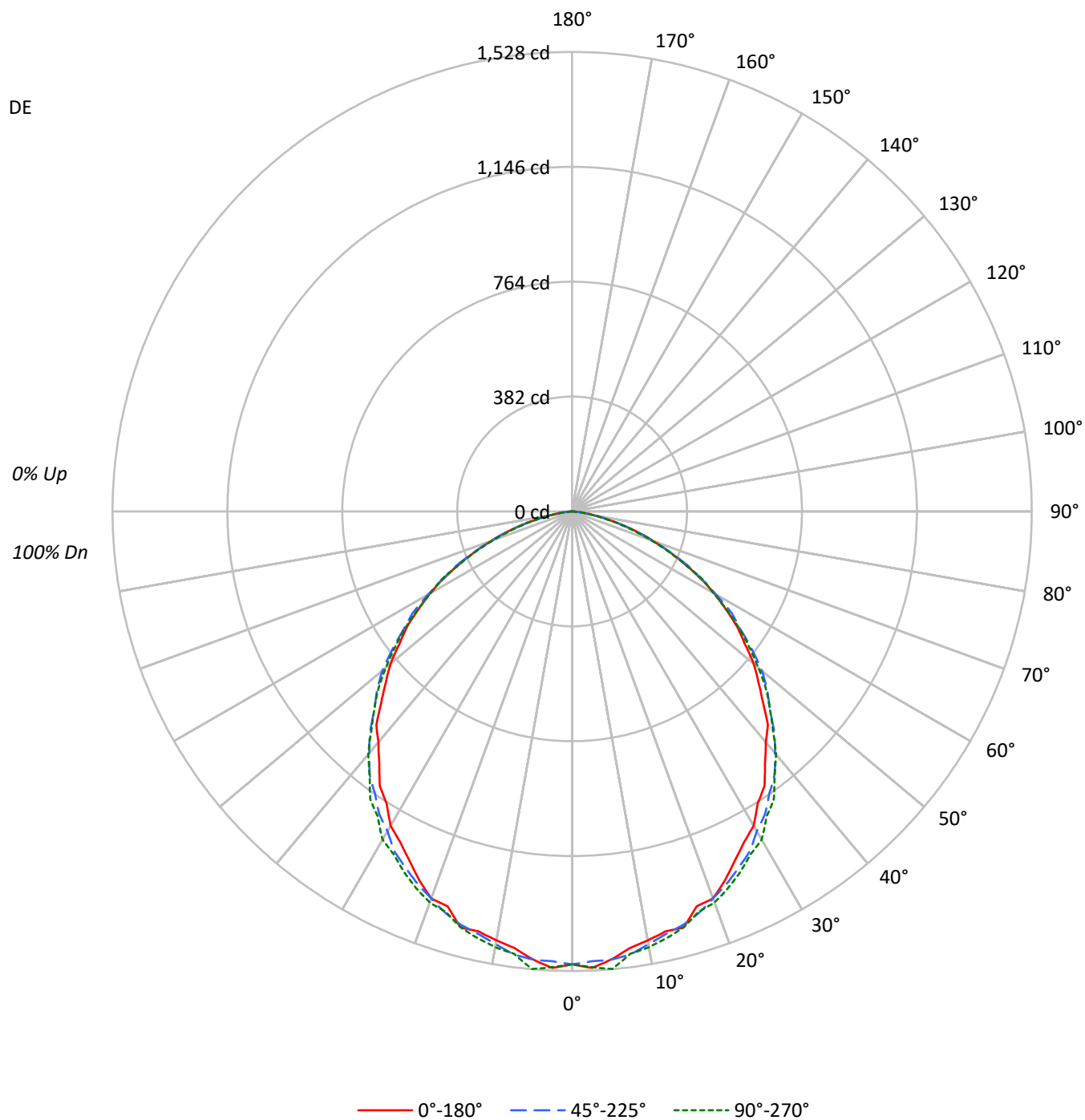
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	4053	4053	4053
5°	4040	4041	4126
10°	3958	3992	4020
15°	3989	3967	3990
20°	3922	3922	3963
25°	3801	3884	3927
30°	3749	3815	3916
35°	3661	3756	3841
40°	3518	3687	3704
45°	3412	3533	3538
50°	3300	3449	3383
55°	3144	3205	3182
60°	2940	2969	2916
65°	2621	2688	2603
70°	2249	2257	2194
75°	1781	1777	1708
80°	1193	1161	1116
85°	648	642	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 3624 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	3.7
10°-20°	401.5	10.6
20°-30°	601.6	15.8
30°-40°	713.0	18.8
40°-50°	714.3	18.8
50°-60°	606.3	16.0
60°-70°	408.8	10.8
70°-80°	179.6	4.7
80°-90°	29.2	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°	1144.8	30.2
0°-40°	1857.8	48.9
0°-60°	3178.4	83.7
0°-90°	3796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1506	1506	1506	1506	1506	
5°	1496	1492	1496	1492	1528	141
15°	1432	1415	1424	1432	1432	399
25°	1280	1287	1308	1325	1323	592
35°	1114	1118	1144	1170	1169	692
45°	896	913	928	952	930	693
55°	670	666	683	678	678	596
65°	412	406	422	406	409	409
75°	171	168	171	159	164	184
85°	21	20	21	20	19	30
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1506.2	1506.2	1506.2	1506.2	1506.2
2.5°	1519.2	1507.7	1497.0	1509.5	1517.0
5°	1495.5	1492.0	1496.0	1491.6	1527.5
7.5°	1464.7	1478.2	1485.9	1481.1	1483.2
10°	1448.4	1443.7	1461.0	1473.1	1471.3
12.5°	1430.9	1437.9	1438.9	1451.9	1453.1
15°	1431.9	1415.3	1424.1	1431.5	1432.1
17.5°	1376.3	1394.1	1400.2	1417.1	1396.1
20°	1369.4	1356.4	1369.4	1386.8	1384.0
22.5°	1327.6	1313.0	1341.1	1356.4	1355.4
25°	1280.2	1287.2	1308.2	1325.3	1322.6
27.5°	1238.6	1246.7	1276.7	1300.2	1285.0
30°	1206.5	1202.4	1227.7	1248.7	1260.3
32.5°	1149.1	1163.9	1193.5	1214.3	1203.2
35°	1114.3	1117.6	1143.5	1169.9	1169.1
37.5°	1053.4	1068.8	1105.2	1112.6	1105.7
40°	1001.5	1016.9	1049.7	1057.7	1054.4
42.5°	963.2	965.9	994.1	1003.3	988.7
45°	896.5	913.2	928.4	952.3	929.8
47.5°	839.7	847.5	880.2	886.6	874.7
50°	788.2	790.9	823.8	815.8	808.0
52.5°	723.4	734.9	753.4	751.8	742.7
55°	670.1	665.7	683.2	678.5	678.3
57.5°	606.2	613.9	628.3	620.9	609.1
60°	546.3	546.5	551.7	543.3	541.8
62.5°	479.6	481.9	483.1	472.8	489.5
65°	411.7	406.2	422.2	406.0	408.8
67.5°	349.3	352.0	350.4	340.3	344.2
70°	285.9	289.4	286.8	275.4	278.9
72.5°	227.9	223.6	226.4	212.0	218.6
75°	171.3	167.8	170.9	158.9	164.3
77.5°	116.7	119.4	117.5	111.0	114.7
80°	77.0	74.9	74.9	71.2	72.0
82.5°	44.9	42.8	42.2	41.0	42.8
85°	21.0	20.4	20.8	20.2	19.4
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)