

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: P560277

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560277
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2HI-40-UNV-82-86-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3406.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

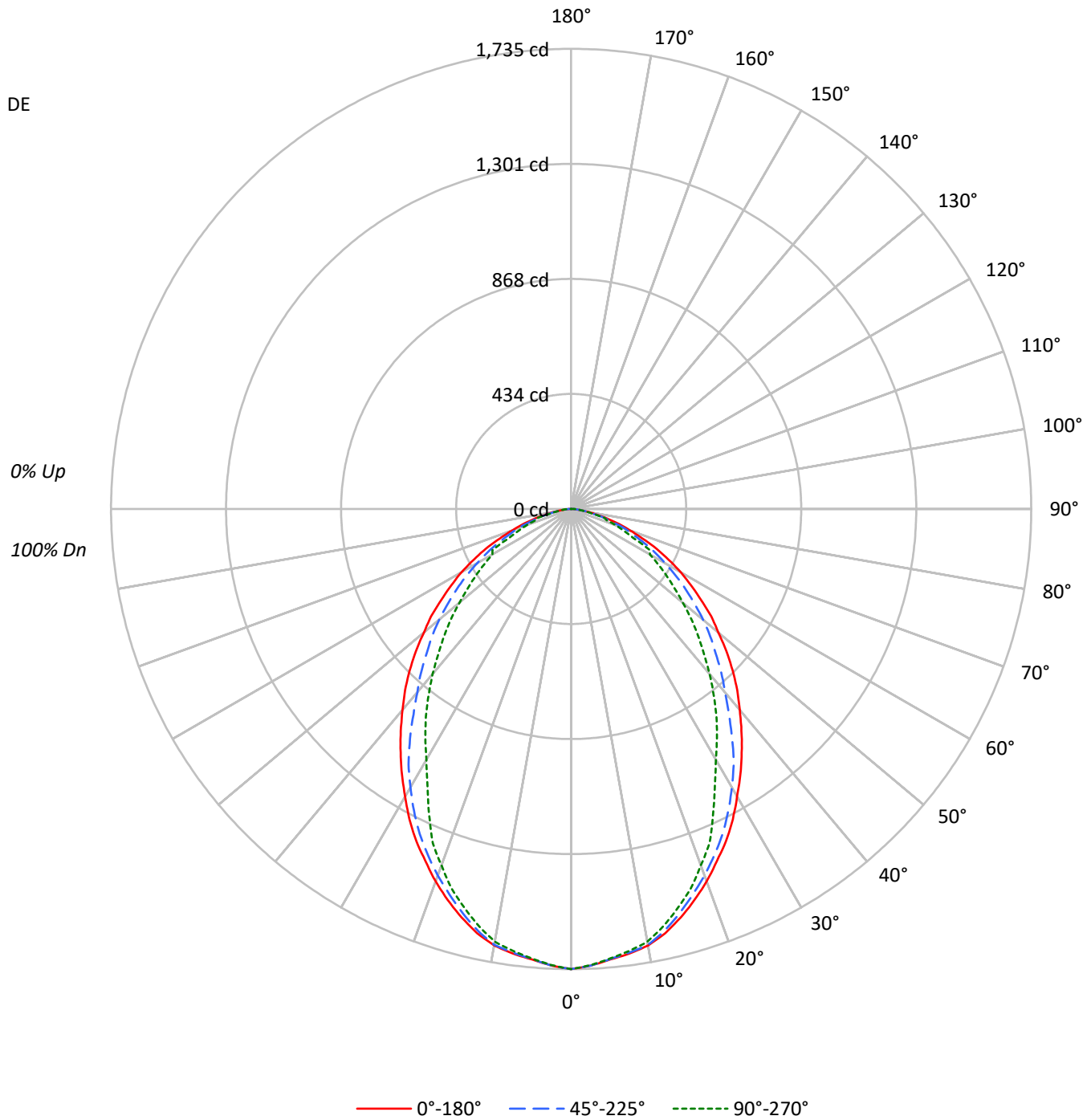
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9338	9338	9338
5°	9211	9200	9189
10°	9131	9120	9054
15°	8885	8795	8673
20°	8558	8420	8191
25°	8207	8028	7527
30°	7778	7529	6781
35°	7366	6958	6273
40°	6947	6341	5707
45°	6549	5862	5160
50°	6063	5442	4602
55°	5608	4931	4122
60°	5139	4405	3692
65°	4521	3857	3269
70°	3725	3377	2777
75°	2961	2587	2712
80°	1990	1866	1742
85°	1241	1488	1735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6549 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.5	4.7
10°-20°	443.2	13.0
20°-30°	613.6	18.0
30°-40°	654.3	19.2
40°-50°	596.9	17.5
50°-60°	467.6	13.7
60°-70°	304.8	8.9
70°-80°	135.0	4.0
80°-90°	29.0	0.9
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°	1218.4	35.8
0°-40°	1872.6	55.0
0°-60°	2937.2	86.2
0°-90°	3406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3406.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1735	1735	1735	1735	1735	
5°	1705	1703	1703	1701	1701	162
15°	1595	1595	1578	1562	1556	448
25°	1382	1374	1352	1304	1268	634
35°	1121	1113	1059	979	955	701
45°	860	842	770	706	678	663
55°	598	580	526	463	439	536
65°	355	335	303	309	257	350
75°	142	132	124	118	130	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1735.0	1735.0	1735.0	1735.0	1735.0
2.5°	1722.9	1722.9	1722.9	1720.9	1720.9
5°	1704.9	1702.9	1702.9	1700.9	1700.9
7.5°	1690.8	1688.8	1686.8	1684.8	1680.8
10°	1670.8	1670.8	1668.8	1658.8	1656.7
12.5°	1638.7	1636.7	1628.7	1614.6	1610.6
15°	1594.6	1594.6	1578.5	1562.5	1556.5
17.5°	1546.4	1544.4	1524.4	1508.3	1500.3
20°	1494.3	1490.3	1470.2	1444.1	1430.1
22.5°	1436.1	1436.1	1412.0	1377.9	1363.9
25°	1382.0	1373.9	1351.9	1303.7	1267.6
27.5°	1319.8	1307.7	1283.7	1215.5	1173.4
30°	1251.6	1245.6	1211.5	1123.2	1091.1
32.5°	1187.4	1177.4	1141.3	1049.0	1022.9
35°	1121.2	1113.2	1059.0	978.8	954.7
37.5°	1055.0	1045.0	976.8	912.6	882.5
40°	988.8	976.8	902.6	844.4	812.3
42.5°	926.7	910.6	838.4	776.2	740.1
45°	860.5	842.4	770.2	706.0	677.9
47.5°	794.3	778.2	712.0	645.9	613.8
50°	724.1	710.0	649.9	583.7	549.6
52.5°	665.9	643.8	585.7	519.5	491.4
55°	597.7	579.7	525.5	463.3	439.3
57.5°	535.5	517.5	467.3	409.2	389.1
60°	477.4	451.3	409.2	359.0	343.0
62.5°	413.2	393.1	357.0	314.9	335.0
65°	355.0	335.0	302.9	308.9	256.7
67.5°	290.8	280.8	252.7	224.6	216.6
70°	236.7	224.6	214.6	184.5	176.5
72.5°	188.5	176.5	162.5	146.4	140.4
75°	142.4	132.4	124.4	118.3	130.4
77.5°	98.3	94.3	88.3	82.2	80.2
80°	64.2	62.2	60.2	58.2	56.2
82.5°	38.1	38.1	38.1	38.1	38.1
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.0	12.0	14.0	16.0	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)