

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: P560211

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560211
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-35-UNV-82-85-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3411.0 lumens
Efficiency: N/A
Efficacy: 79.0 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

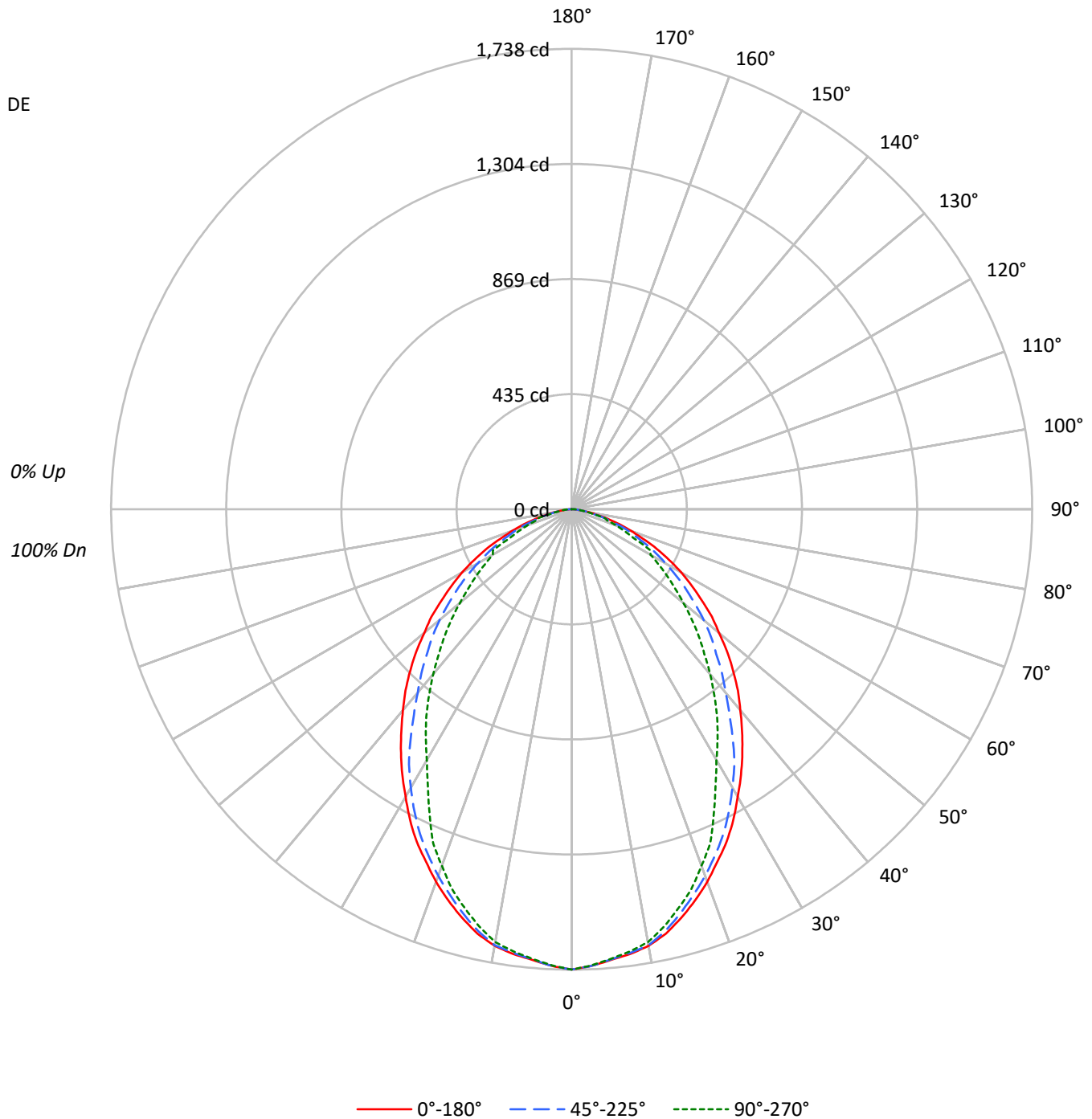
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9351	9351	9351
5°	9224	9213	9203
10°	9144	9133	9067
15°	8898	8808	8685
20°	8571	8433	8203
25°	8219	8040	7539
30°	7789	7539	6791
35°	7378	6968	6282
40°	6957	6350	5715
45°	6559	5871	5167
50°	6071	5449	4608
55°	5617	4938	4128
60°	5146	4411	3697
65°	4527	3862	3274
70°	3729	3382	2782
75°	2965	2589	2716
80°	1993	1869	1742
85°	1241	1488	1735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6559 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	4.7
10°-20°	443.9	13.0
20°-30°	614.5	18.0
30°-40°	655.3	19.2
40°-50°	597.8	17.5
50°-60°	468.3	13.7
60°-70°	305.2	8.9
70°-80°	135.2	4.0
80°-90°	29.1	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°	1220.1	35.8
0°-40°	1875.4	55.0
0°-60°	2941.5	86.2
0°-90°	3411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3411.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1707	1705	1705	1703	1703	162
15°	1597	1597	1581	1565	1559	449
25°	1384	1376	1354	1306	1270	635
35°	1123	1115	1061	980	956	702
45°	862	844	771	707	679	664
55°	599	580	526	464	440	537
65°	356	336	303	309	257	350
75°	143	133	124	118	131	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°	1737.5	1737.5	1737.5	1737.5	1737.5
2.5°	1725.5	1725.5	1725.5	1723.5	1723.5
5°	1707.4	1705.4	1705.4	1703.4	1703.4
7.5°	1693.3	1691.3	1689.3	1687.3	1683.3
10°	1673.2	1673.2	1671.2	1661.2	1659.2
12.5°	1641.1	1639.1	1631.1	1617.0	1613.0
15°	1596.9	1596.9	1580.8	1564.8	1558.7
17.5°	1548.7	1546.7	1526.6	1510.5	1502.5
20°	1496.5	1492.5	1472.4	1446.3	1432.2
22.5°	1438.2	1438.2	1414.1	1380.0	1365.9
25°	1384.0	1376.0	1353.9	1305.6	1269.5
27.5°	1321.7	1309.7	1285.6	1217.3	1175.1
30°	1253.4	1247.4	1213.2	1124.9	1092.7
32.5°	1189.1	1179.1	1142.9	1050.5	1024.4
35°	1122.9	1114.8	1060.6	980.2	956.1
37.5°	1056.6	1046.5	978.2	914.0	883.8
40°	990.3	978.2	903.9	845.7	813.5
42.5°	928.0	911.9	839.6	777.4	741.2
45°	861.7	843.7	771.3	707.1	678.9
47.5°	795.4	779.4	713.1	646.8	614.7
50°	725.1	711.1	650.8	584.5	550.4
52.5°	666.9	644.8	586.5	520.3	492.1
55°	598.6	580.5	526.3	464.0	439.9
57.5°	536.3	518.2	468.0	409.8	389.7
60°	478.1	452.0	409.8	359.6	343.5
62.5°	413.8	393.7	357.5	315.4	335.5
65°	355.5	335.5	303.3	309.3	257.1
67.5°	291.3	281.2	253.1	225.0	216.9
70°	237.0	225.0	214.9	184.8	176.8
72.5°	188.8	176.8	162.7	146.6	140.6
75°	142.6	132.6	124.5	118.5	130.6
77.5°	98.4	94.4	88.4	82.4	80.3
80°	64.3	62.3	60.3	58.3	56.2
82.5°	38.2	38.2	38.2	38.2	38.2
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.1	12.1	14.1	16.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)