

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: P560295

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560295
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-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3551.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

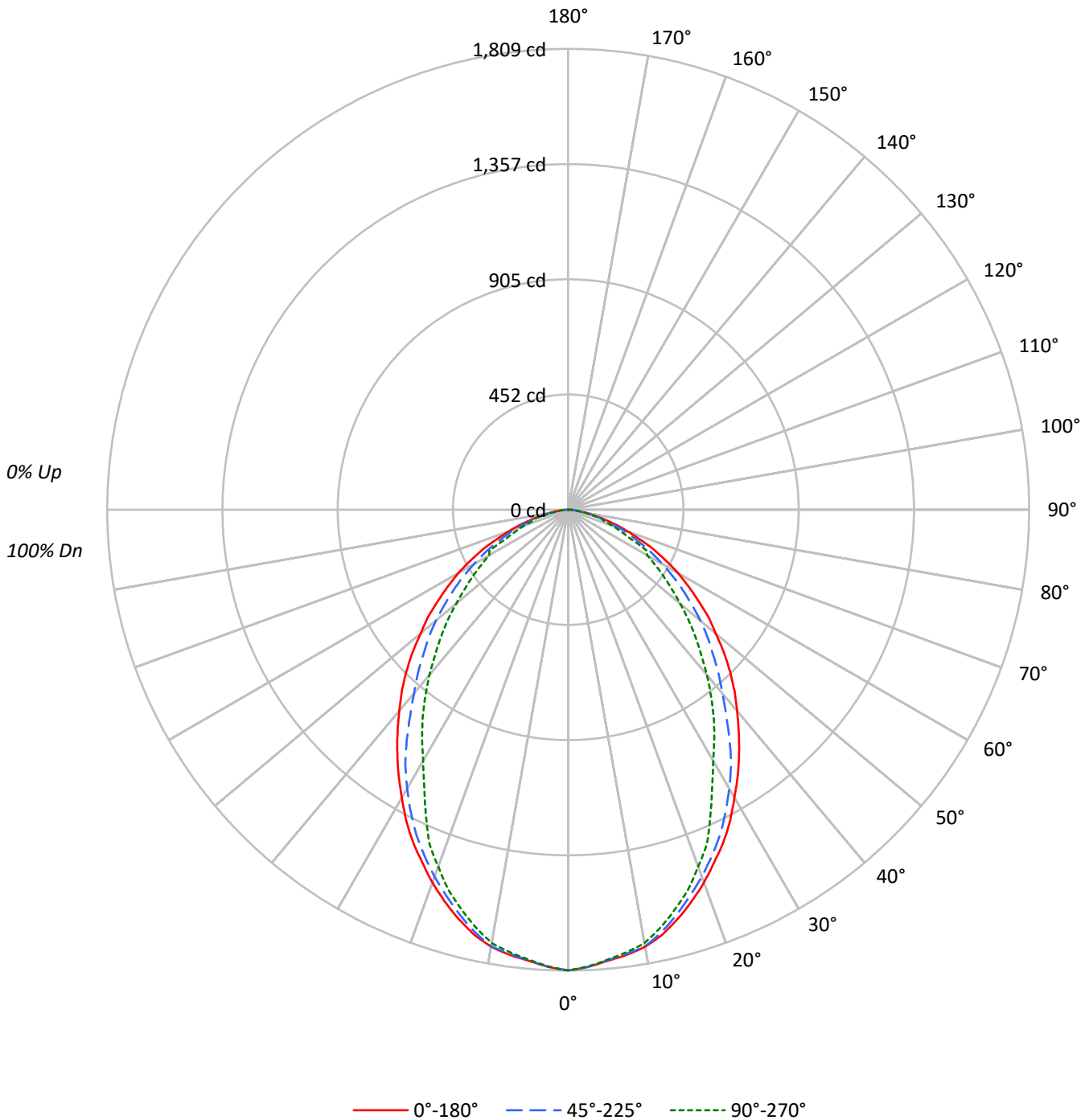
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9735	9735	9735
5°	9603	9592	9580
10°	9519	9508	9440
15°	9263	9170	9041
20°	8923	8779	8539
25°	8556	8369	7848
30°	8109	7849	7070
35°	7680	7254	6540
40°	7243	6611	5950
45°	6828	6112	5380
50°	6321	5673	4798
55°	5848	5141	4297
60°	5357	4592	3849
65°	4713	4022	3409
70°	3884	3522	2895
75°	3088	2697	2826
80°	2073	1943	1816
85°	1291	1550	1809

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6828 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.4	4.7
10°-20°	462.1	13.0
20°-30°	639.7	18.0
30°-40°	682.2	19.2
40°-50°	622.3	17.5
50°-60°	487.5	13.7
60°-70°	317.8	8.9
70°-80°	140.8	4.0
80°-90°	30.2	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°	1270.2	35.8
0°-40°	1952.4	55.0
0°-60°	3062.3	86.2
0°-90°	3551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1809	1809	1809	1809	1809	
5°	1778	1775	1775	1773	1773	169
15°	1662	1662	1646	1629	1623	467
25°	1441	1432	1409	1359	1322	661
35°	1169	1161	1104	1020	995	731
45°	897	878	803	736	707	691
55°	623	604	548	483	458	559
65°	370	349	316	322	268	365
75°	148	138	130	123	136	159
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1808.8	1808.8	1808.8	1808.8	1808.8
2.5°	1796.3	1796.3	1796.3	1794.2	1794.2
5°	1777.5	1775.4	1775.4	1773.3	1773.3
7.5°	1762.8	1760.7	1758.6	1756.6	1752.4
10°	1741.9	1741.9	1739.8	1729.4	1727.3
12.5°	1708.5	1706.4	1698.0	1683.4	1679.2
15°	1662.5	1662.5	1645.7	1629.0	1622.7
17.5°	1612.3	1610.2	1589.3	1572.5	1564.2
20°	1557.9	1553.7	1532.8	1505.6	1491.0
22.5°	1497.3	1497.3	1472.2	1436.6	1422.0
25°	1440.8	1432.4	1409.4	1359.2	1321.6
27.5°	1376.0	1363.4	1338.3	1267.2	1223.3
30°	1304.9	1298.6	1263.0	1171.0	1137.6
32.5°	1238.0	1227.5	1189.9	1093.7	1066.5
35°	1168.9	1160.6	1104.1	1020.5	995.4
37.5°	1099.9	1089.5	1018.4	951.5	920.1
40°	1030.9	1018.4	941.0	880.4	846.9
42.5°	966.1	949.4	874.1	809.3	771.6
45°	897.1	878.3	803.0	736.1	706.8
47.5°	828.1	811.4	742.4	673.3	639.9
50°	754.9	740.3	677.5	608.5	573.0
52.5°	694.3	671.3	610.6	541.6	512.3
55°	623.2	604.3	547.9	483.1	458.0
57.5°	558.3	539.5	487.2	426.6	405.7
60°	497.7	470.5	426.6	374.3	357.6
62.5°	430.8	409.9	372.2	328.3	349.2
65°	370.1	349.2	315.8	322.0	267.7
67.5°	303.2	292.8	263.5	234.2	225.8
70°	246.8	234.2	223.8	192.4	184.0
72.5°	196.6	184.0	169.4	152.7	146.4
75°	148.5	138.0	129.7	123.4	135.9
77.5°	102.5	98.3	92.0	85.7	83.6
80°	66.9	64.8	62.7	60.6	58.6
82.5°	39.7	39.7	39.7	39.7	39.7
85°	20.9	23.0	25.1	27.2	29.3
87.5°	12.5	12.5	14.6	16.7	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)