

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: P560791

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560791
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-12-4-LD4-1HI-35-UNV-82-87-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3553.0 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: 4' x H: 0')
CIE Type: Direct

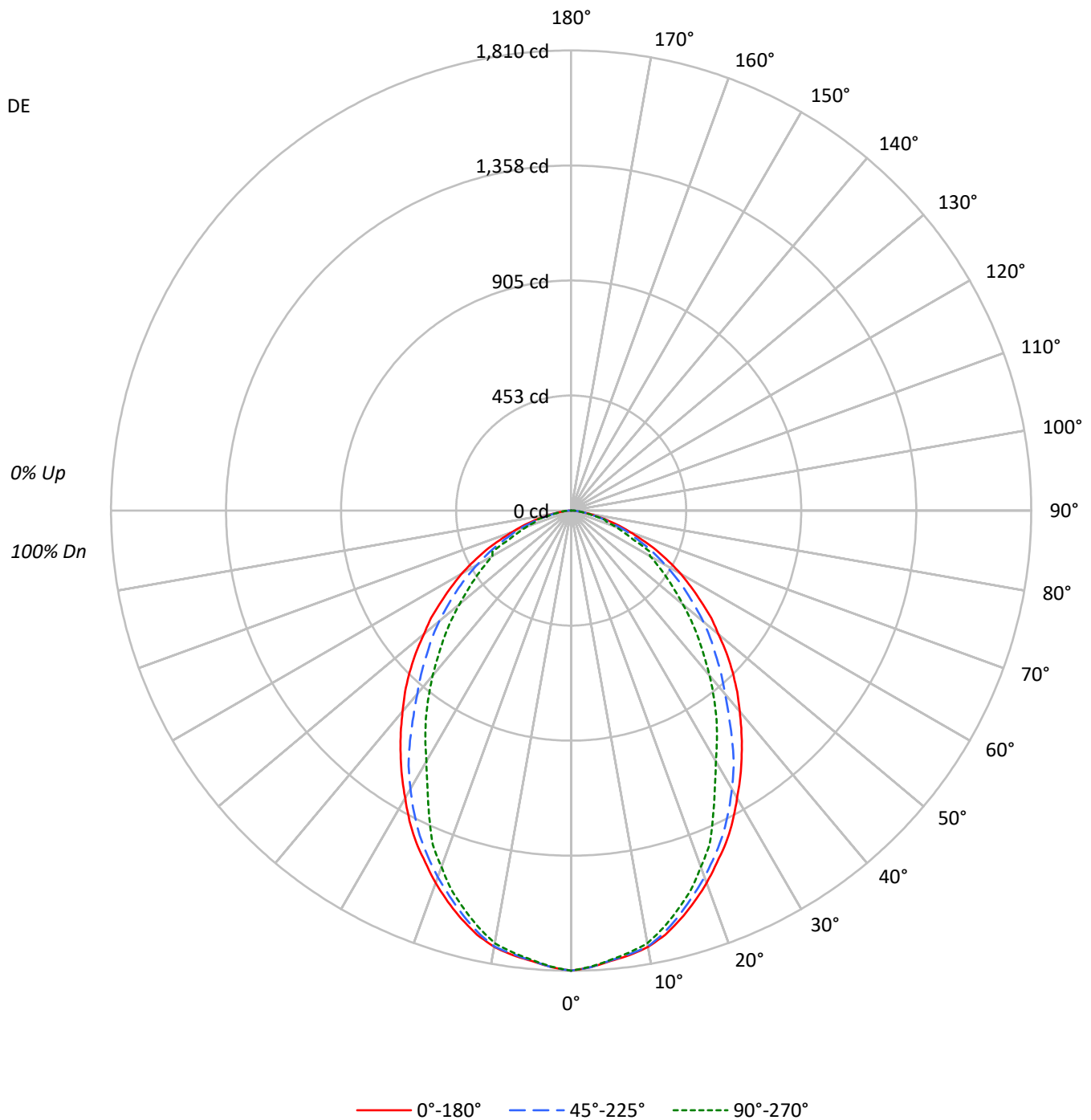
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4870	4870	4870
5°	4804	4799	4793
10°	4762	4757	4723
15°	4634	4588	4523
20°	4464	4392	4272
25°	4280	4187	3926
30°	4057	3927	3537
35°	3842	3629	3272
40°	3623	3307	2977
45°	3416	3057	2691
50°	3162	2838	2400
55°	2925	2572	2150
60°	2680	2297	1926
65°	2358	2011	1705
70°	1943	1762	1448
75°	1545	1349	1414
80°	1038	973	908
85°	645	775	905

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3416 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.5	4.7
10°-20°	462.4	13.0
20°-30°	640.1	18.0
30°-40°	682.5	19.2
40°-50°	622.7	17.5
50°-60°	487.8	13.7
60°-70°	317.9	8.9
70°-80°	140.9	4.0
80°-90°	30.3	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°	1270.9	35.8
0°-40°	1953.5	55.0
0°-60°	3064.0	86.2
0°-90°	3553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1810	1810	1810	1810	1810	
5°	1778	1776	1776	1774	1774	169
15°	1663	1663	1647	1630	1624	468
25°	1442	1433	1410	1360	1322	662
35°	1170	1161	1105	1021	996	731
45°	898	879	803	736	707	691
55°	624	605	548	483	458	559
65°	370	349	316	322	268	365
75°	149	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°	1809.9	1809.9	1809.9	1809.9	1809.9
2.5°	1797.3	1797.3	1797.3	1795.2	1795.2
5°	1778.5	1776.4	1776.4	1774.3	1774.3
7.5°	1763.8	1761.7	1759.6	1757.5	1753.4
10°	1742.9	1742.9	1740.8	1730.3	1728.3
12.5°	1709.4	1707.3	1699.0	1684.3	1680.1
15°	1663.4	1663.4	1646.7	1629.9	1623.6
17.5°	1613.2	1611.1	1590.2	1573.4	1565.1
20°	1558.8	1554.6	1533.7	1506.5	1491.8
22.5°	1498.1	1498.1	1473.0	1437.4	1422.8
25°	1441.6	1433.2	1410.2	1360.0	1322.3
27.5°	1376.7	1364.2	1339.1	1267.9	1224.0
30°	1305.6	1299.3	1263.8	1171.7	1138.2
32.5°	1238.6	1228.2	1190.5	1094.3	1067.1
35°	1169.6	1161.2	1104.7	1021.0	995.9
37.5°	1100.6	1090.1	1019.0	952.0	920.6
40°	1031.5	1019.0	941.5	880.9	847.4
42.5°	966.6	949.9	874.6	809.7	772.1
45°	897.6	878.8	803.4	736.5	707.2
47.5°	828.6	811.8	742.8	673.7	640.2
50°	755.3	740.7	677.9	608.9	573.3
52.5°	694.6	671.6	611.0	541.9	512.6
55°	623.5	604.7	548.2	483.3	458.2
57.5°	558.6	539.8	487.5	426.8	405.9
60°	498.0	470.8	426.8	374.5	357.8
62.5°	431.0	410.1	372.4	328.5	349.4
65°	370.3	349.4	315.9	322.2	267.8
67.5°	303.4	292.9	263.6	234.3	226.0
70°	246.9	234.3	223.9	192.5	184.1
72.5°	196.7	184.1	169.5	152.7	146.5
75°	148.6	138.1	129.7	123.4	136.0
77.5°	102.5	98.3	92.1	85.8	83.7
80°	67.0	64.9	62.8	60.7	58.6
82.5°	39.8	39.8	39.8	39.8	39.8
85°	20.9	23.0	25.1	27.2	29.3
87.5°	12.6	12.6	14.6	16.7	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)