

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: P560787

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560787
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-82-85-EDD
Description: 1X4 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: 3714.0 lumens
Efficiency: N/A
Efficacy: 86.0 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

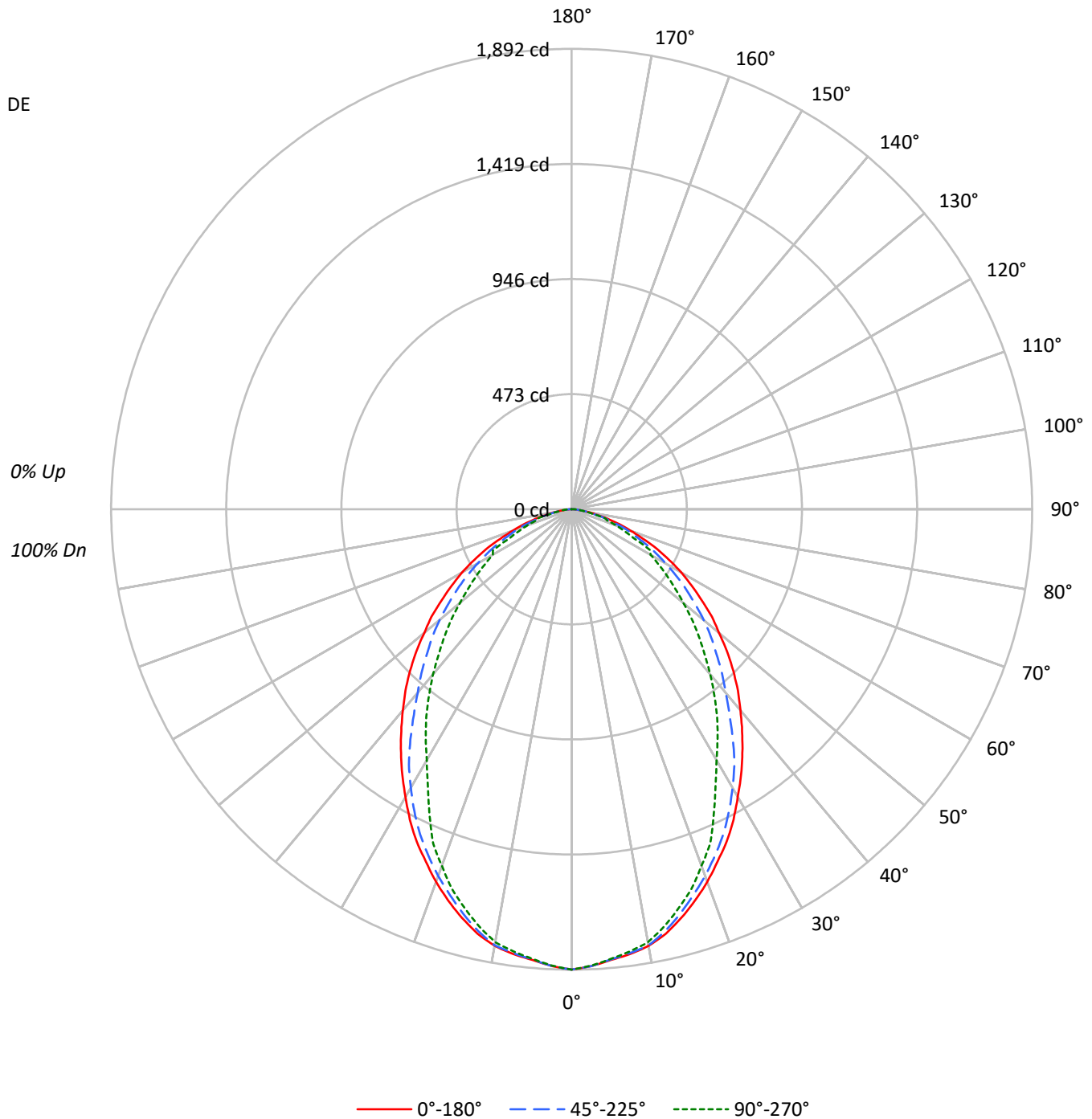
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5091	5091	5091
5°	5022	5016	5010
10°	4978	4972	4937
15°	4844	4795	4728
20°	4666	4591	4466
25°	4474	4377	4104
30°	4241	4105	3697
35°	4016	3794	3420
40°	3788	3457	3112
45°	3571	3196	2813
50°	3306	2966	2509
55°	3058	2688	2247
60°	2801	2401	2013
65°	2465	2103	1783
70°	2031	1841	1515
75°	1615	1410	1478
80°	1085	1017	948
85°	676	809	945

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3571 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.1	4.7
10°-20°	483.3	13.0
20°-30°	669.1	18.0
30°-40°	713.5	19.2
40°-50°	650.9	17.5
50°-60°	509.9	13.7
60°-70°	332.3	8.9
70°-80°	147.3	4.0
80°-90°	31.6	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°	1328.5	35.8
0°-40°	2042.0	55.0
0°-60°	3202.8	86.2
0°-90°	3714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3714.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1892	1892	1892	1892	1892	
5°	1859	1857	1857	1855	1855	176
15°	1739	1739	1721	1704	1697	489
25°	1507	1498	1474	1422	1382	692
35°	1223	1214	1155	1067	1041	764
45°	938	919	840	770	739	723
55°	652	632	573	505	479	585
65°	387	365	330	337	280	381
75°	155	144	136	129	142	166
85°	22	24	26	28	31	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1891.9	1891.9	1891.9	1891.9	1891.9
2.5°	1878.7	1878.7	1878.7	1876.6	1876.6
5°	1859.1	1856.9	1856.9	1854.7	1854.7
7.5°	1843.7	1841.6	1839.4	1837.2	1832.8
10°	1821.9	1821.9	1819.7	1808.8	1806.6
12.5°	1786.9	1784.7	1775.9	1760.6	1756.3
15°	1738.8	1738.8	1721.3	1703.8	1697.2
17.5°	1686.3	1684.1	1662.2	1644.7	1636.0
20°	1629.4	1625.0	1603.2	1574.7	1559.4
22.5°	1566.0	1566.0	1539.7	1502.6	1487.2
25°	1506.9	1498.2	1474.1	1421.6	1382.3
27.5°	1439.1	1426.0	1399.8	1325.4	1279.5
30°	1364.8	1358.2	1321.0	1224.8	1189.8
32.5°	1294.8	1283.8	1244.5	1143.9	1115.4
35°	1222.6	1213.9	1154.8	1067.3	1041.1
37.5°	1150.4	1139.5	1065.1	995.1	962.3
40°	1078.3	1065.1	984.2	920.8	885.8
42.5°	1010.5	993.0	914.2	846.4	807.0
45°	938.3	918.6	839.9	769.9	739.2
47.5°	866.1	848.6	776.4	704.3	669.3
50°	789.6	774.2	708.6	636.5	599.3
52.5°	726.1	702.1	638.6	566.5	535.8
55°	651.8	632.1	573.0	505.2	479.0
57.5°	584.0	564.3	509.6	446.2	424.3
60°	520.5	492.1	446.2	391.5	374.0
62.5°	450.5	428.7	389.3	343.4	365.2
65°	387.1	365.2	330.3	336.8	280.0
67.5°	317.1	306.2	275.6	245.0	236.2
70°	258.1	245.0	234.0	201.2	192.5
72.5°	205.6	192.5	177.2	159.7	153.1
75°	155.3	144.4	135.6	129.0	142.2
77.5°	107.2	102.8	96.2	89.7	87.5
80°	70.0	67.8	65.6	63.4	61.2
82.5°	41.6	41.6	41.6	41.6	41.6
85°	21.9	24.1	26.2	28.4	30.6
87.5°	13.1	13.1	15.3	17.5	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)