

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: P560259

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560259
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-81-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3519.0 lumens
Efficiency: N/A
Efficacy: 81.5 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

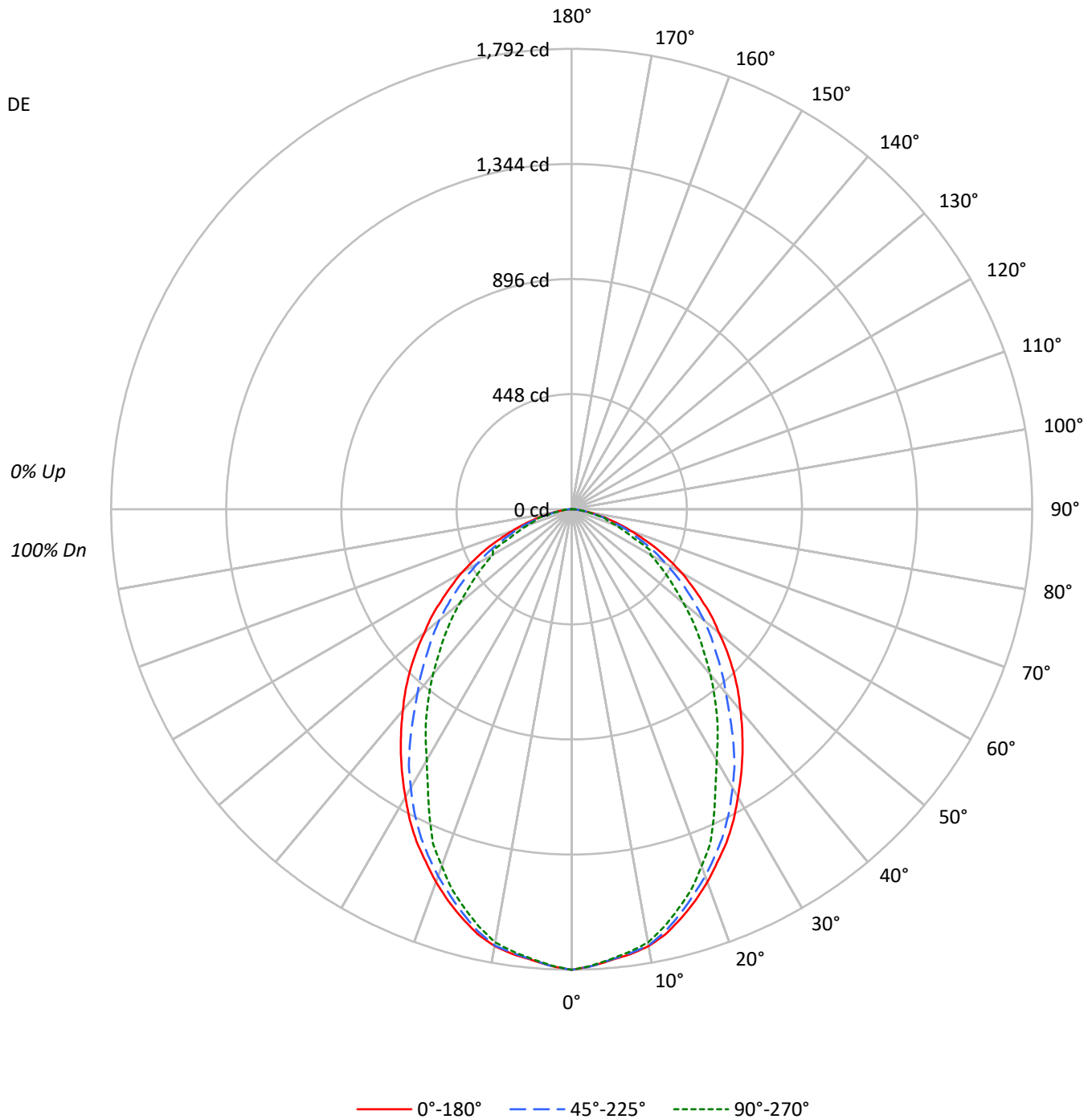
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9647	9647	9647
5°	9516	9505	9494
10°	9434	9422	9354
15°	9180	9087	8960
20°	8842	8700	8462
25°	8479	8294	7777
30°	8036	7779	7006
35°	7611	7189	6481
40°	7177	6551	5897
45°	6766	6057	5331
50°	6264	5622	4754
55°	5794	5094	4258
60°	5309	4550	3815
65°	4671	3985	3379
70°	3847	3489	2870
75°	3059	2672	2801
80°	2055	1928	1798
85°	1278	1538	1791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6766 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.9	4.7
10°-20°	457.9	13.0
20°-30°	634.0	18.0
30°-40°	676.0	19.2
40°-50°	616.7	17.5
50°-60°	483.1	13.7
60°-70°	314.9	8.9
70°-80°	139.5	4.0
80°-90°	30.0	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°	1258.8	35.8
0°-40°	1934.8	55.0
0°-60°	3034.6	86.2
0°-90°	3519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1792	1792	1792	1792	1792	
5°	1761	1759	1759	1757	1757	167
15°	1648	1648	1631	1614	1608	463
25°	1428	1420	1397	1347	1310	656
35°	1158	1150	1094	1011	986	724
45°	889	870	796	729	700	685
55°	618	599	543	479	454	554
65°	367	346	313	319	265	361
75°	147	137	128	122	135	158
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°	1792.5	1792.5	1792.5	1792.5	1792.5
2.5°	1780.1	1780.1	1780.1	1778.0	1778.0
5°	1761.4	1759.4	1759.4	1757.3	1757.3
7.5°	1746.9	1744.9	1742.8	1740.7	1736.6
10°	1726.2	1726.2	1724.1	1713.8	1711.7
12.5°	1693.1	1691.0	1682.7	1668.2	1664.0
15°	1647.5	1647.5	1630.9	1614.3	1608.1
17.5°	1597.7	1595.7	1574.9	1558.4	1550.1
20°	1543.9	1539.7	1519.0	1492.0	1477.5
22.5°	1483.8	1483.8	1458.9	1423.7	1409.2
25°	1427.8	1419.5	1396.7	1347.0	1309.7
27.5°	1363.6	1351.1	1326.3	1255.8	1212.3
30°	1293.1	1286.9	1251.7	1160.5	1127.3
32.5°	1226.8	1216.4	1179.1	1083.8	1056.9
35°	1158.4	1150.1	1094.2	1011.3	986.4
37.5°	1090.0	1079.7	1009.2	942.9	911.8
40°	1021.6	1009.2	932.5	872.4	839.3
42.5°	957.4	940.8	866.2	802.0	764.7
45°	889.0	870.4	795.8	729.4	700.4
47.5°	820.6	804.0	735.7	667.3	634.1
50°	748.1	733.6	671.4	603.0	567.8
52.5°	688.0	665.2	605.1	536.7	507.7
55°	617.5	598.9	542.9	478.7	453.8
57.5°	553.3	534.7	482.8	422.7	402.0
60°	493.2	466.3	422.7	370.9	354.4
62.5°	426.9	406.2	368.9	325.3	346.1
65°	366.8	346.1	312.9	319.1	265.3
67.5°	300.5	290.1	261.1	232.1	223.8
70°	244.5	232.1	221.7	190.7	182.4
72.5°	194.8	182.4	167.9	151.3	145.1
75°	147.1	136.8	128.5	122.3	134.7
77.5°	101.5	97.4	91.2	85.0	82.9
80°	66.3	64.2	62.2	60.1	58.0
82.5°	39.4	39.4	39.4	39.4	39.4
85°	20.7	22.8	24.9	26.9	29.0
87.5°	12.4	12.4	14.5	16.6	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)