

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: P560777

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560777
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-81-88-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3268.0 lumens
Efficiency: N/A
Efficacy: 75.6 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

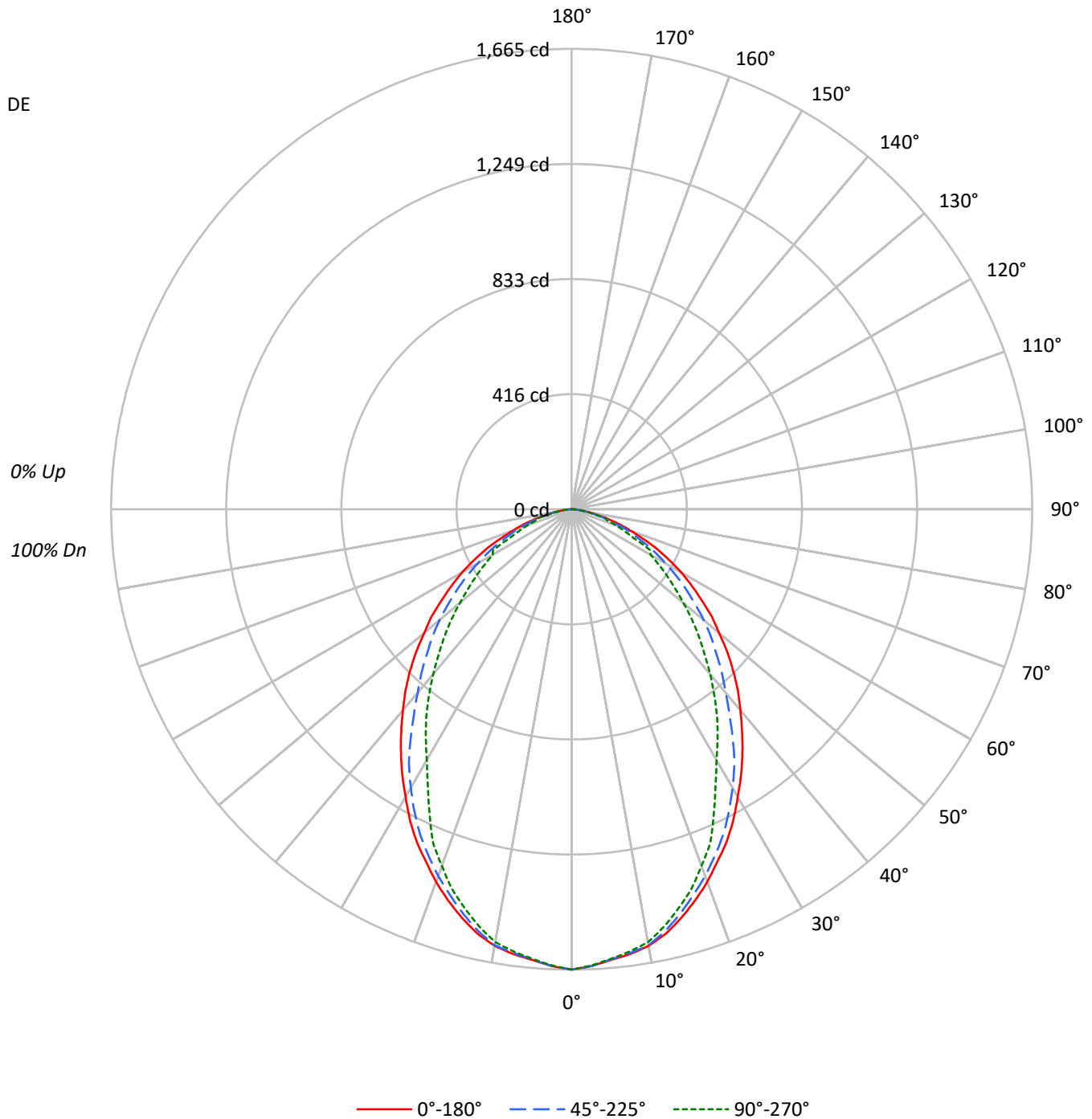
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4480	4480	4480
5°	4419	4414	4408
10°	4380	4375	4344
15°	4262	4220	4160
20°	4106	4040	3930
25°	3937	3851	3611
30°	3732	3612	3253
35°	3534	3338	3009
40°	3333	3042	2738
45°	3142	2812	2476
50°	2908	2610	2207
55°	2691	2365	1978
60°	2465	2113	1771
65°	2169	1850	1568
70°	1787	1620	1333
75°	1420	1240	1301
80°	955	894	835
85°	593	713	831

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3142 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	4.7
10°-20°	425.3	13.0
20°-30°	588.8	18.0
30°-40°	627.8	19.2
40°-50°	572.7	17.5
50°-60°	448.7	13.7
60°-70°	292.4	8.9
70°-80°	129.6	4.0
80°-90°	27.8	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°	1169.0	35.8
0°-40°	1796.8	55.0
0°-60°	2818.2	86.2
0°-90°	3268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1665	1665	1665	1665	1665	
5°	1636	1634	1634	1632	1632	155
15°	1530	1530	1515	1499	1493	430
25°	1326	1318	1297	1251	1216	609
35°	1076	1068	1016	939	916	673
45°	826	808	739	677	650	636
55°	574	556	504	445	422	514
65°	341	321	291	296	246	336
75°	137	127	119	114	125	146
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1664.7	1664.7	1664.7	1664.7	1664.7
2.5°	1653.1	1653.1	1653.1	1651.2	1651.2
5°	1635.8	1633.9	1633.9	1632.0	1632.0
7.5°	1622.3	1620.4	1618.5	1616.6	1612.7
10°	1603.1	1603.1	1601.2	1591.5	1589.6
12.5°	1572.3	1570.4	1562.7	1549.2	1545.4
15°	1530.0	1530.0	1514.6	1499.2	1493.4
17.5°	1483.8	1481.8	1462.6	1447.2	1439.5
20°	1433.7	1429.9	1410.6	1385.6	1372.2
22.5°	1377.9	1377.9	1354.8	1322.1	1308.6
25°	1326.0	1318.3	1297.1	1250.9	1216.3
27.5°	1266.3	1254.8	1231.7	1166.2	1125.8
30°	1200.9	1195.1	1162.4	1077.7	1046.9
32.5°	1139.3	1129.7	1095.0	1006.5	981.5
35°	1075.8	1068.1	1016.1	939.1	916.1
37.5°	1012.3	1002.7	937.2	875.6	846.8
40°	948.8	937.2	866.0	810.2	779.4
42.5°	889.1	873.7	804.4	744.8	710.1
45°	825.6	808.3	739.0	677.4	650.5
47.5°	762.1	746.7	683.2	619.7	588.9
50°	694.7	681.3	623.5	560.0	527.3
52.5°	638.9	617.8	561.9	498.4	471.5
55°	573.5	556.2	504.2	444.6	421.5
57.5°	513.8	496.5	448.4	392.6	373.3
60°	458.0	433.0	392.6	344.5	329.1
62.5°	396.4	377.2	342.6	302.1	321.4
65°	340.6	321.4	290.6	296.4	246.3
67.5°	279.0	269.4	242.5	215.5	207.8
70°	227.1	215.5	205.9	177.1	169.4
72.5°	180.9	169.4	155.9	140.5	134.7
75°	136.6	127.0	119.3	113.5	125.1
77.5°	94.3	90.5	84.7	78.9	77.0
80°	61.6	59.7	57.7	55.8	53.9
82.5°	36.6	36.6	36.6	36.6	36.6
85°	19.2	21.2	23.1	25.0	26.9
87.5°	11.5	11.5	13.5	15.4	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)