

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: P561171

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561171
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-LD4-1STD-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: 3028.0 lumens
Efficiency: N/A
Efficacy: 90.9 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

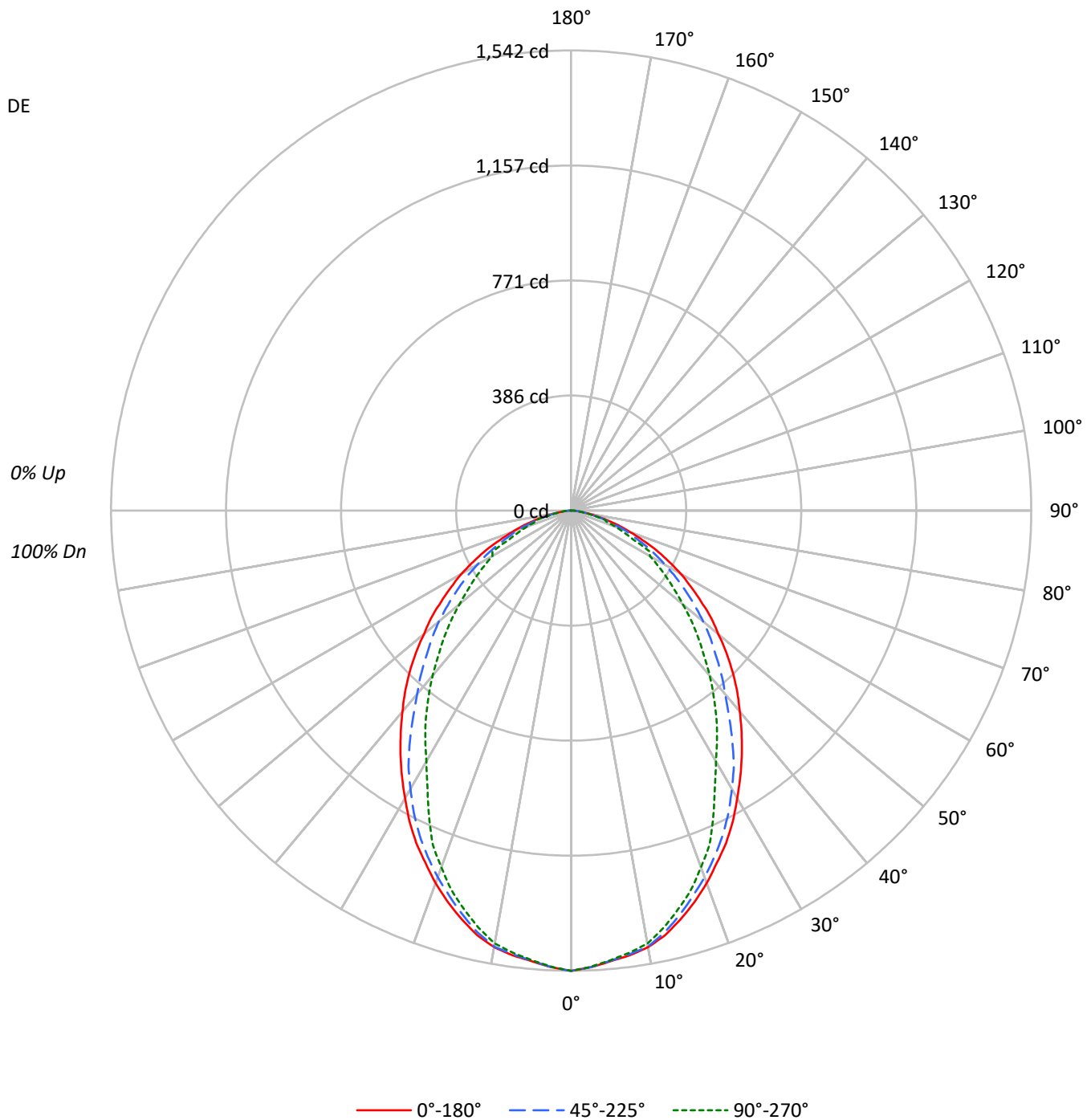
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	4151	4151	4151
5°	4094	4089	4085
10°	4059	4054	4025
15°	3949	3909	3855
20°	3804	3743	3641
25°	3648	3568	3346
30°	3457	3347	3014
35°	3275	3093	2788
40°	3088	2819	2537
45°	2911	2606	2294
50°	2695	2418	2045
55°	2493	2192	1832
60°	2284	1958	1641
65°	2010	1715	1453
70°	1655	1501	1234
75°	1316	1150	1205
80°	885	829	773
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2911 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.6	4.7
10°-20°	394.0	13.0
20°-30°	545.5	18.0
30°-40°	581.7	19.2
40°-50°	530.7	17.5
50°-60°	415.7	13.7
60°-70°	271.0	8.9
70°-80°	120.0	4.0
80°-90°	25.8	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°	1083.1	35.8
0°-40°	1664.8	55.0
0°-60°	2611.2	86.2
0°-90°	3028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3028.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1542	1542	1542	1542	1542	
5°	1516	1514	1514	1512	1512	144
15°	1418	1418	1403	1389	1384	399
25°	1229	1222	1202	1159	1127	564
35°	997	990	942	870	849	623
45°	765	749	685	628	603	589
55°	531	515	467	412	390	477
65°	316	298	269	275	228	311
75°	127	118	111	105	116	136
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1542.4	1542.4	1542.4	1542.4	1542.4
2.5°	1531.7	1531.7	1531.7	1529.9	1529.9
5°	1515.7	1513.9	1513.9	1512.1	1512.1
7.5°	1503.2	1501.4	1499.6	1497.8	1494.3
10°	1485.4	1485.4	1483.6	1474.7	1472.9
12.5°	1456.8	1455.0	1447.9	1435.4	1431.9
15°	1417.6	1417.6	1403.3	1389.1	1383.7
17.5°	1374.8	1373.0	1355.2	1340.9	1333.8
20°	1328.4	1324.9	1307.0	1283.9	1271.4
22.5°	1276.7	1276.7	1255.3	1225.0	1212.5
25°	1228.6	1221.5	1201.8	1159.0	1126.9
27.5°	1173.3	1162.6	1141.2	1080.6	1043.1
30°	1112.7	1107.3	1077.0	998.6	970.0
32.5°	1055.6	1046.7	1014.6	932.6	909.4
35°	996.8	989.6	941.5	870.2	848.8
37.5°	937.9	929.0	868.4	811.3	784.6
40°	879.1	868.4	802.4	750.7	722.2
42.5°	823.8	809.5	745.4	690.1	658.0
45°	765.0	748.9	684.7	627.7	602.7
47.5°	706.1	691.9	633.0	574.2	545.6
50°	643.7	631.2	577.7	518.9	488.6
52.5°	592.0	572.4	520.7	461.8	436.9
55°	531.4	515.3	467.2	411.9	390.5
57.5°	476.1	460.1	415.5	363.8	345.9
60°	424.4	401.2	363.8	319.2	304.9
62.5°	367.3	349.5	317.4	280.0	297.8
65°	315.6	297.8	269.3	274.6	228.2
67.5°	258.6	249.6	224.7	199.7	192.6
70°	210.4	199.7	190.8	164.0	156.9
72.5°	167.6	156.9	144.4	130.2	124.8
75°	126.6	117.7	110.6	105.2	115.9
77.5°	87.4	83.8	78.5	73.1	71.3
80°	57.1	55.3	53.5	51.7	49.9
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.8	19.6	21.4	23.2	25.0
87.5°	10.7	10.7	12.5	14.3	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)