

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: P561305

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561305
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-50-UNV-82-88-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2679.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

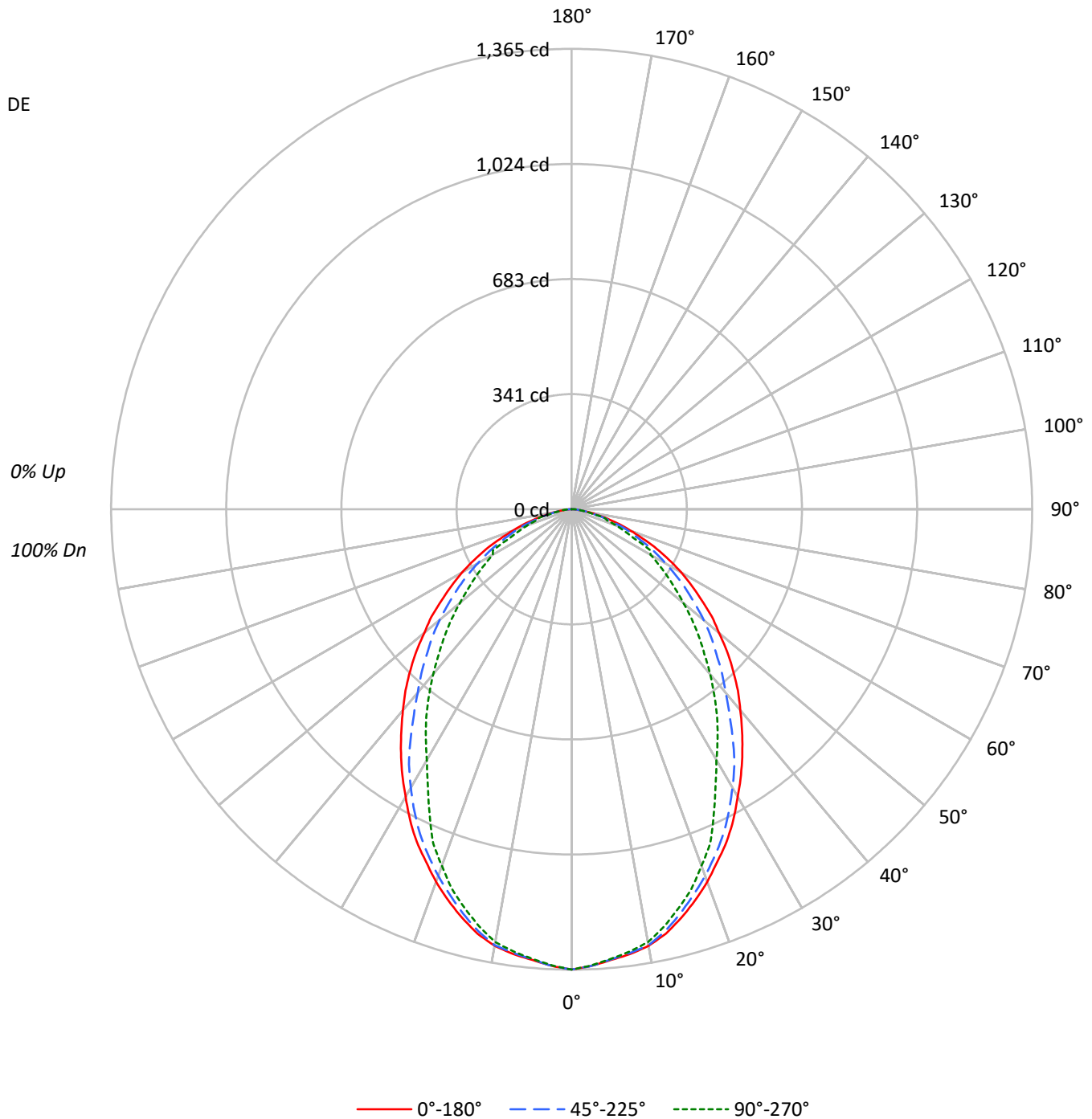
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3672	3672	3672
5°	3622	3618	3614
10°	3591	3587	3561
15°	3494	3459	3411
20°	3366	3312	3221
25°	3227	3157	2961
30°	3059	2961	2667
35°	2897	2736	2467
40°	2732	2494	2244
45°	2576	2305	2029
50°	2384	2140	1810
55°	2206	1939	1621
60°	2021	1732	1452
65°	1778	1517	1286
70°	1465	1328	1092
75°	1164	1017	1066
80°	783	733	685
85°	488	584	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.0	4.7
10°-20°	348.6	13.0
20°-30°	482.6	18.0
30°-40°	514.6	19.2
40°-50°	469.5	17.5
50°-60°	367.8	13.7
60°-70°	239.7	8.9
70°-80°	106.2	4.0
80°-90°	22.8	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°	958.3	35.8
0°-40°	1472.9	55.0
0°-60°	2310.3	86.2
0°-90°	2679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1365	1365	1365	1365	1365	
5°	1341	1339	1339	1338	1338	127
15°	1254	1254	1242	1229	1224	353
25°	1087	1081	1063	1026	997	499
35°	882	876	833	770	751	551
45°	677	663	606	555	533	521
55°	470	456	413	364	346	422
65°	279	264	238	243	202	275
75°	112	104	98	93	102	120
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1364.6	1364.6	1364.6	1364.6	1364.6
2.5°	1355.2	1355.2	1355.2	1353.6	1353.6
5°	1341.0	1339.4	1339.4	1337.8	1337.8
7.5°	1329.9	1328.4	1326.8	1325.2	1322.1
10°	1314.2	1314.2	1312.6	1304.7	1303.1
12.5°	1288.9	1287.3	1281.0	1270.0	1266.8
15°	1254.2	1254.2	1241.6	1229.0	1224.2
17.5°	1216.3	1214.8	1199.0	1186.4	1180.1
20°	1175.3	1172.2	1156.4	1135.9	1124.8
22.5°	1129.6	1129.6	1110.6	1083.8	1072.8
25°	1087.0	1080.7	1063.3	1025.5	997.1
27.5°	1038.1	1028.6	1009.7	956.0	922.9
30°	984.4	979.7	952.9	883.5	858.2
32.5°	934.0	926.1	897.7	825.1	804.6
35°	881.9	875.6	833.0	769.9	751.0
37.5°	829.8	821.9	768.3	717.8	694.2
40°	777.8	768.3	709.9	664.2	638.9
42.5°	728.9	716.2	659.4	610.5	582.1
45°	676.8	662.6	605.8	555.3	533.2
47.5°	624.7	612.1	560.1	508.0	482.8
50°	569.5	558.5	511.2	459.1	432.3
52.5°	523.8	506.4	460.7	408.6	386.5
55°	470.1	455.9	413.3	364.4	345.5
57.5°	421.2	407.0	367.6	321.8	306.1
60°	375.5	355.0	321.8	282.4	269.8
62.5°	325.0	309.2	280.8	247.7	263.5
65°	279.2	263.5	238.2	243.0	201.9
67.5°	228.8	220.9	198.8	176.7	170.4
70°	186.2	176.7	168.8	145.1	138.8
72.5°	148.3	138.8	127.8	115.2	110.4
75°	112.0	104.1	97.8	93.1	102.5
77.5°	77.3	74.1	69.4	64.7	63.1
80°	50.5	48.9	47.3	45.8	44.2
82.5°	30.0	30.0	30.0	30.0	30.0
85°	15.8	17.4	18.9	20.5	22.1
87.5°	9.5	9.5	11.0	12.6	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)