

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: P561161

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561161
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-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: 2664.0 lumens
Efficiency: N/A
Efficacy: 80.0 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

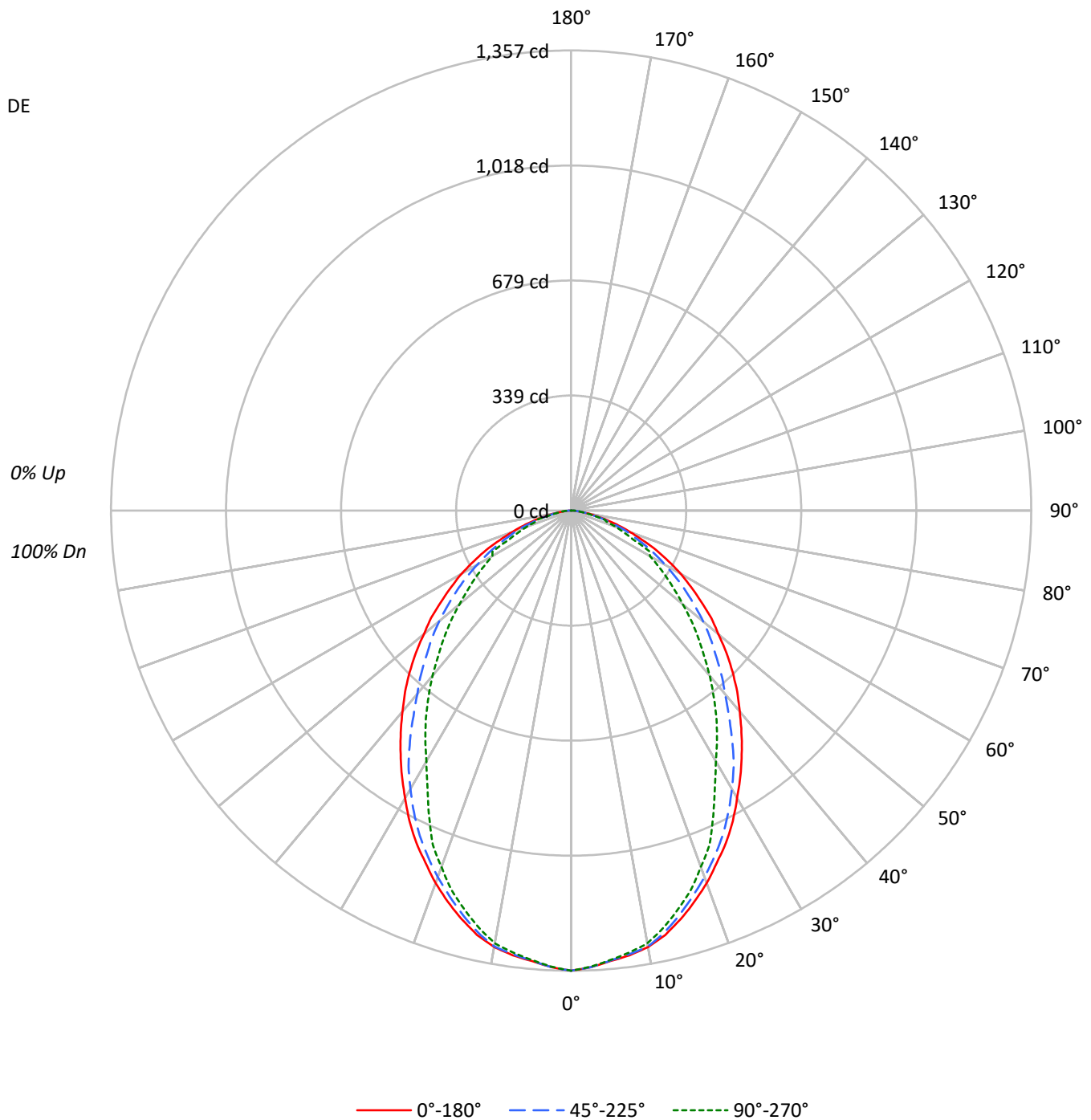
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3652	3652	3652
5°	3602	3598	3593
10°	3571	3566	3541
15°	3475	3439	3392
20°	3347	3293	3203
25°	3209	3140	2944
30°	3042	2944	2652
35°	2881	2721	2453
40°	2717	2480	2232
45°	2561	2293	2018
50°	2371	2128	1799
55°	2193	1928	1612
60°	2010	1722	1444
65°	1768	1508	1279
70°	1456	1321	1087
75°	1158	1012	1061
80°	778	730	680
85°	485	580	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2561 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	4.7
10°-20°	346.7	13.0
20°-30°	479.9	18.0
30°-40°	511.8	19.2
40°-50°	466.9	17.5
50°-60°	365.8	13.7
60°-70°	238.4	8.9
70°-80°	105.6	4.0
80°-90°	22.7	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°	952.9	35.8
0°-40°	1464.7	55.0
0°-60°	2297.3	86.2
0°-90°	2664.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2664.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1357	1357	1357	1357	1357	
5°	1334	1332	1332	1330	1330	127
15°	1247	1247	1235	1222	1217	351
25°	1081	1075	1057	1020	992	496
35°	877	871	828	766	747	548
45°	673	659	602	552	530	518
55°	468	453	411	362	344	419
65°	278	262	237	242	201	274
75°	111	104	97	93	102	119
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°	1357.0	1357.0	1357.0	1357.0	1357.0
2.5°	1347.6	1347.6	1347.6	1346.0	1346.0
5°	1333.5	1331.9	1331.9	1330.3	1330.3
7.5°	1322.5	1320.9	1319.4	1317.8	1314.6
10°	1306.8	1306.8	1305.2	1297.4	1295.8
12.5°	1281.7	1280.1	1273.9	1262.9	1259.7
15°	1247.2	1247.2	1234.6	1222.1	1217.4
17.5°	1209.5	1208.0	1192.3	1179.7	1173.5
20°	1168.8	1165.6	1149.9	1129.5	1118.5
22.5°	1123.3	1123.3	1104.4	1077.8	1066.8
25°	1080.9	1074.6	1057.4	1019.7	991.5
27.5°	1032.3	1022.9	1004.0	950.7	917.7
30°	978.9	974.2	947.6	878.5	853.4
32.5°	928.7	920.9	892.6	820.5	800.1
35°	877.0	870.7	828.3	765.6	746.7
37.5°	825.2	817.3	764.0	713.8	690.3
40°	773.4	764.0	706.0	660.5	635.4
42.5°	724.8	712.2	655.8	607.1	578.9
45°	673.0	658.9	602.4	552.2	530.3
47.5°	621.2	608.7	556.9	505.2	480.1
50°	566.3	555.4	508.3	456.5	429.8
52.5°	520.8	503.6	458.1	406.3	384.4
55°	467.5	453.4	411.0	362.4	343.6
57.5°	418.9	404.7	365.5	320.0	304.3
60°	373.4	353.0	320.0	280.8	268.3
62.5°	323.2	307.5	279.2	246.3	262.0
65°	277.7	262.0	236.9	241.6	200.8
67.5°	227.5	219.6	197.7	175.7	169.4
70°	185.1	175.7	167.9	144.3	138.1
72.5°	147.5	138.1	127.1	114.5	109.8
75°	111.4	103.5	97.3	92.6	102.0
77.5°	76.9	73.7	69.0	64.3	62.8
80°	50.2	48.6	47.1	45.5	43.9
82.5°	29.8	29.8	29.8	29.8	29.8
85°	15.7	17.3	18.8	20.4	22.0
87.5°	9.4	9.4	11.0	12.6	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)