

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: P560971

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560971
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-LD4-1LO-35-UNV-81-94-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2362.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

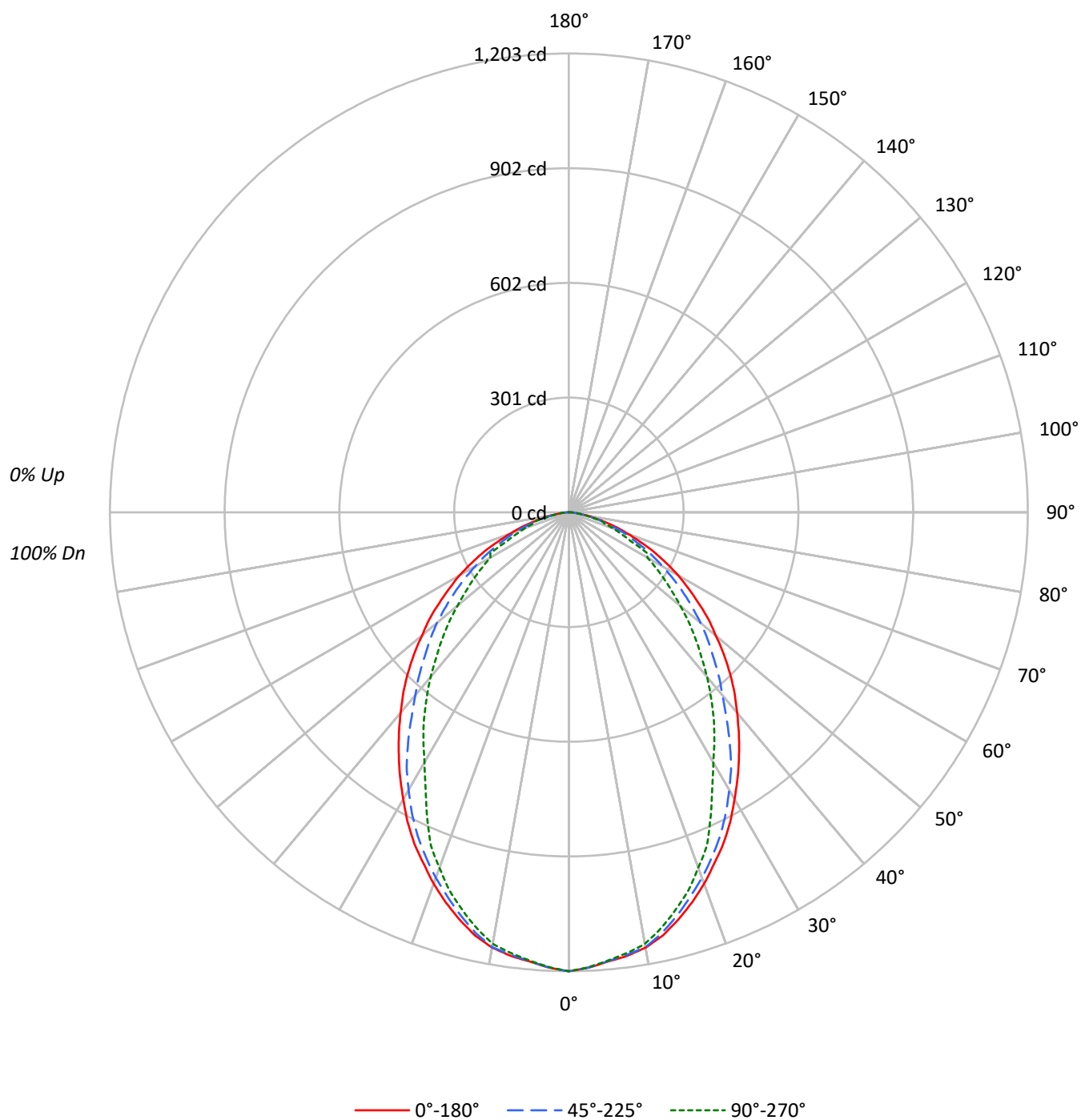
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3238	3238	3238
5°	3194	3190	3186
10°	3166	3162	3139
15°	3081	3050	3007
20°	2968	2920	2840
25°	2846	2784	2610
30°	2697	2610	2351
35°	2554	2413	2175
40°	2409	2199	1979
45°	2271	2033	1789
50°	2102	1887	1595
55°	1945	1710	1429
60°	1781	1527	1280
65°	1568	1337	1133
70°	1291	1171	963
75°	1027	896	940
80°	690	646	603
85°	429	516	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2271 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	4.7
10°-20°	307.4	13.0
20°-30°	425.5	18.0
30°-40°	453.7	19.2
40°-50°	413.9	17.5
50°-60°	324.3	13.7
60°-70°	211.4	8.9
70°-80°	93.6	4.0
80°-90°	20.1	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°	844.9	35.8
0°-40°	1298.7	55.0
0°-60°	2036.9	86.2
0°-90°	2362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1203	1203	1203	1203	1203	
5°	1182	1181	1181	1180	1180	112
15°	1106	1106	1095	1084	1079	311
25°	958	953	938	904	879	440
35°	778	772	734	679	662	486
45°	597	584	534	490	470	460
55°	414	402	364	321	305	372
65°	246	232	210	214	178	243
75°	99	92	86	82	90	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1203.2	1203.2	1203.2	1203.2	1203.2
2.5°	1194.8	1194.8	1194.8	1193.4	1193.4
5°	1182.3	1180.9	1180.9	1179.5	1179.5
7.5°	1172.6	1171.2	1169.8	1168.4	1165.6
10°	1158.7	1158.7	1157.3	1150.3	1148.9
12.5°	1136.4	1135.0	1129.5	1119.7	1116.9
15°	1105.8	1105.8	1094.7	1083.5	1079.4
17.5°	1072.4	1071.0	1057.1	1046.0	1040.4
20°	1036.3	1033.5	1019.6	1001.5	991.7
22.5°	995.9	995.9	979.2	955.6	945.8
25°	958.4	952.8	937.5	904.1	879.1
27.5°	915.2	906.9	890.2	842.9	813.7
30°	868.0	863.8	840.1	778.9	756.7
32.5°	823.4	816.5	791.5	727.5	709.4
35°	777.5	772.0	734.4	678.8	662.1
37.5°	731.6	724.7	677.4	632.9	612.0
40°	685.7	677.4	625.9	585.6	563.3
42.5°	642.6	631.5	581.4	538.3	513.3
45°	596.7	584.2	534.1	489.6	470.1
47.5°	550.8	539.7	493.8	447.9	425.6
50°	502.1	492.4	450.7	404.8	381.1
52.5°	461.8	446.5	406.2	360.3	340.8
55°	414.5	402.0	364.4	321.3	304.6
57.5°	371.4	358.9	324.1	283.8	269.8
60°	331.0	313.0	283.8	249.0	237.9
62.5°	286.5	272.6	247.6	218.4	232.3
65°	246.2	232.3	210.0	214.2	178.0
67.5°	201.7	194.7	175.3	155.8	150.2
70°	164.1	155.8	148.8	128.0	122.4
72.5°	130.7	122.4	112.7	101.5	97.4
75°	98.8	91.8	86.2	82.1	90.4
77.5°	68.2	65.4	61.2	57.0	55.6
80°	44.5	43.1	41.7	40.3	38.9
82.5°	26.4	26.4	26.4	26.4	26.4
85°	13.9	15.3	16.7	18.1	19.5
87.5°	8.3	8.3	9.7	11.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)