

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: P561924

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561924
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-24-2-LD4-1LO-35-UNV-81-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2245.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

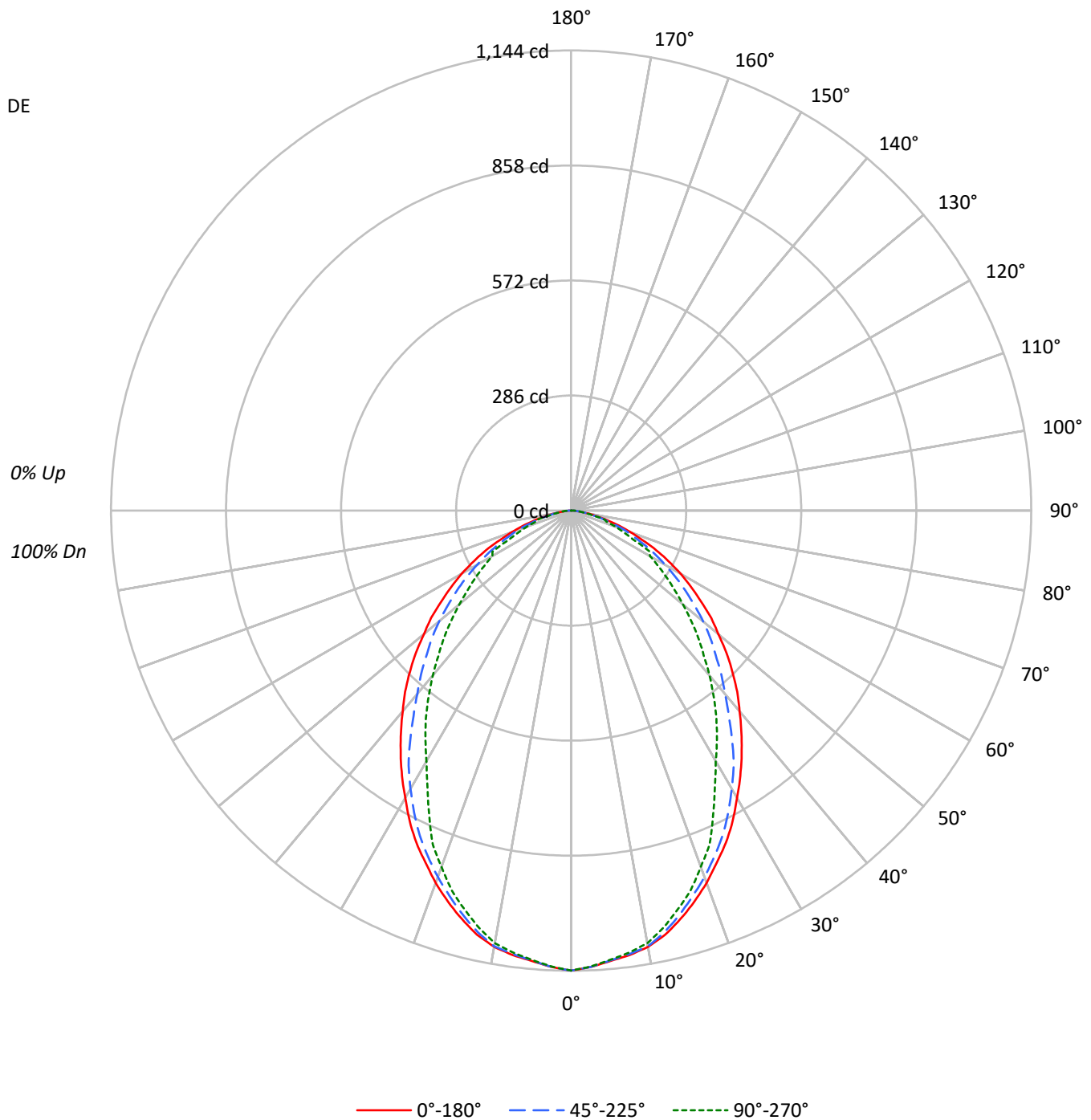
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	1539	1539	1539
5°	1518	1516	1514
10°	1505	1503	1492
15°	1464	1449	1429
20°	1410	1388	1350
25°	1352	1323	1240
30°	1282	1241	1117
35°	1214	1146	1034
40°	1145	1045	940
45°	1079	966	850
50°	999	897	758
55°	924	813	679
60°	847	726	608
65°	745	635	539
70°	614	557	458
75°	488	426	447
80°	328	308	287
85°	204	245	286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1079 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.5	4.7
10°-20°	292.1	13.0
20°-30°	404.5	18.0
30°-40°	431.3	19.2
40°-50°	393.4	17.5
50°-60°	308.2	13.7
60°-70°	200.9	8.9
70°-80°	89.0	4.0
80°-90°	19.1	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°	803.1	35.8
0°-40°	1234.3	55.0
0°-60°	1936.0	86.2
0°-90°	2245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1144	1144	1144	1144	1144	
5°	1124	1122	1122	1121	1121	107
15°	1051	1051	1040	1030	1026	295
25°	911	906	891	859	836	418
35°	739	734	698	645	629	462
45°	567	555	508	465	447	437
55°	394	382	346	305	290	353
65°	234	221	200	204	169	231
75°	94	87	82	78	86	101
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1143.6	1143.6	1143.6	1143.6	1143.6
2.5°	1135.6	1135.6	1135.6	1134.3	1134.3
5°	1123.7	1122.4	1122.4	1121.1	1121.1
7.5°	1114.5	1113.2	1111.8	1110.5	1107.9
10°	1101.3	1101.3	1099.9	1093.3	1092.0
12.5°	1080.1	1078.8	1073.5	1064.3	1061.6
15°	1051.0	1051.0	1040.5	1029.9	1025.9
17.5°	1019.3	1018.0	1004.8	994.2	988.9
20°	984.9	982.3	969.1	951.9	942.6
22.5°	946.6	946.6	930.7	908.2	899.0
25°	910.9	905.6	891.1	859.3	835.5
27.5°	869.9	862.0	846.1	801.2	773.4
30°	825.0	821.0	798.5	740.3	719.2
32.5°	782.7	776.0	752.2	691.4	674.2
35°	739.0	733.7	698.0	645.2	629.3
37.5°	695.4	688.8	643.8	601.5	581.7
40°	651.8	643.8	594.9	556.6	535.4
42.5°	610.8	600.2	552.6	511.6	487.8
45°	567.2	555.3	507.7	465.4	446.9
47.5°	523.5	513.0	469.3	425.7	404.5
50°	477.3	468.0	428.3	384.7	362.2
52.5°	438.9	424.4	386.0	342.4	323.9
55°	394.0	382.1	346.4	305.4	289.5
57.5°	353.0	341.1	308.0	269.7	256.5
60°	314.6	297.5	269.7	236.6	226.1
62.5°	272.3	259.1	235.3	207.6	220.8
65°	234.0	220.8	199.6	203.6	169.2
67.5°	191.7	185.1	166.6	148.1	142.8
70°	156.0	148.1	141.5	121.6	116.3
72.5°	124.3	116.3	107.1	96.5	92.5
75°	93.9	87.3	82.0	78.0	85.9
77.5°	64.8	62.1	58.2	54.2	52.9
80°	42.3	41.0	39.7	38.3	37.0
82.5°	25.1	25.1	25.1	25.1	25.1
85°	13.2	14.5	15.9	17.2	18.5
87.5°	7.9	7.9	9.3	10.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)