

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: P562180

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562180
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-24-4-LD4-1LO-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2277.0 lumens
Efficiency: N/A
Efficacy: 97.3 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

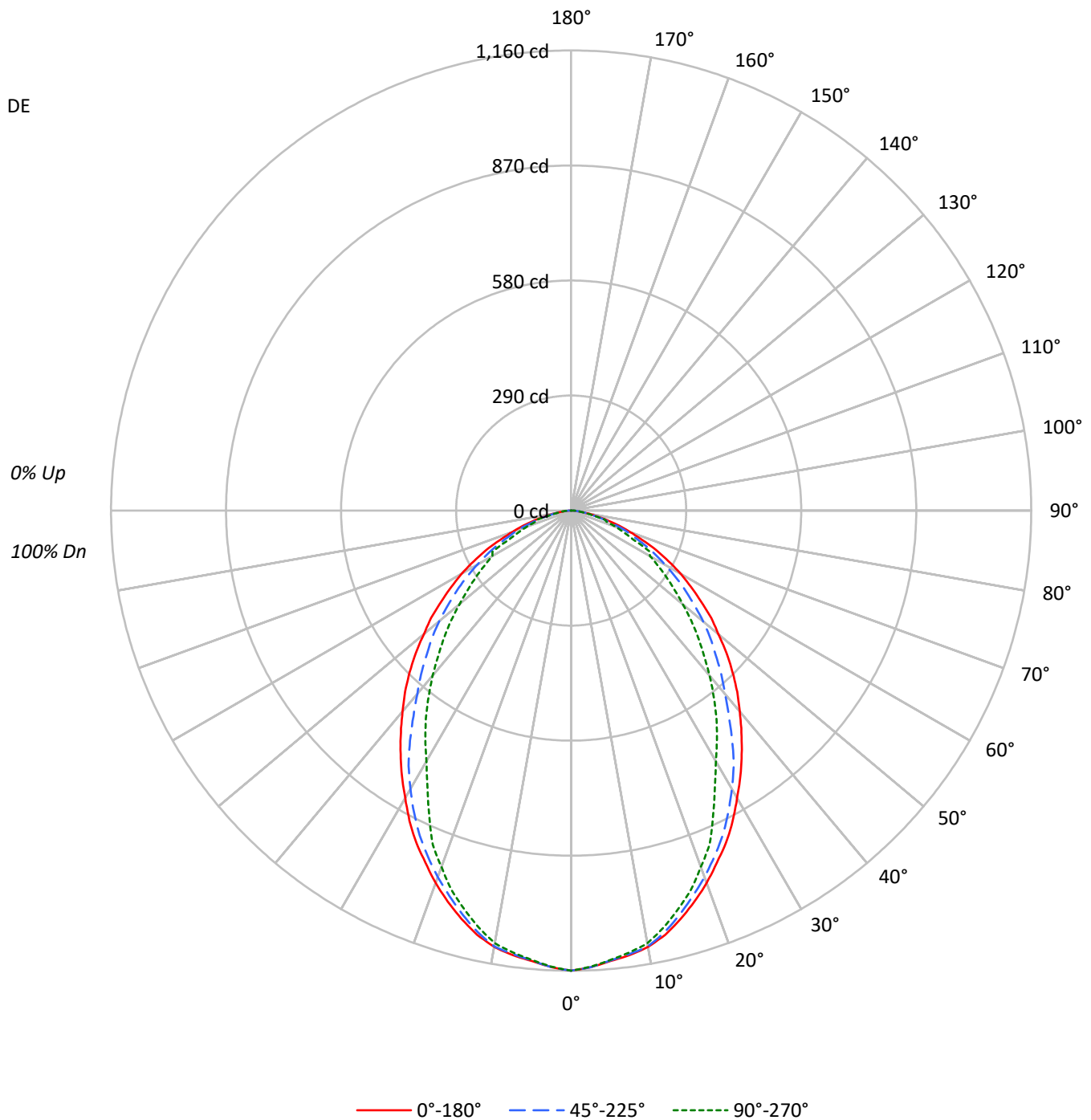
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1561	1561	1561
5°	1539	1538	1536
10°	1526	1524	1513
15°	1485	1470	1449
20°	1430	1407	1369
25°	1372	1342	1258
30°	1300	1258	1133
35°	1231	1163	1048
40°	1161	1060	954
45°	1094	980	862
50°	1013	909	769
55°	937	824	689
60°	859	736	617
65°	755	645	546
70°	622	565	464
75°	495	432	453
80°	332	311	291
85°	207	249	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1094 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.0	4.7
10°-20°	296.3	13.0
20°-30°	410.2	18.0
30°-40°	437.4	19.2
40°-50°	399.1	17.5
50°-60°	312.6	13.7
60°-70°	203.7	8.9
70°-80°	90.3	4.0
80°-90°	19.4	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°	814.5	35.8
0°-40°	1251.9	55.0
0°-60°	1963.6	86.2
0°-90°	2277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2277.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1160	1160	1160	1160	1160	
5°	1140	1138	1138	1137	1137	108
15°	1066	1066	1055	1045	1040	300
25°	924	918	904	872	847	424
35°	750	744	708	654	638	469
45°	575	563	515	472	453	443
55°	400	388	351	310	294	358
65°	237	224	202	206	172	234
75°	95	88	83	79	87	102
85°	13	15	16	17	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1159.9	1159.9	1159.9	1159.9	1159.9
2.5°	1151.8	1151.8	1151.8	1150.5	1150.5
5°	1139.8	1138.4	1138.4	1137.1	1137.1
7.5°	1130.4	1129.0	1127.7	1126.4	1123.7
10°	1117.0	1117.0	1115.6	1108.9	1107.6
12.5°	1095.5	1094.2	1088.8	1079.4	1076.7
15°	1066.0	1066.0	1055.3	1044.6	1040.5
17.5°	1033.8	1032.5	1019.1	1008.4	1003.0
20°	999.0	996.3	982.9	965.4	956.1
22.5°	960.1	960.1	944.0	921.2	911.8
25°	923.9	918.5	903.8	871.6	847.4
27.5°	882.3	874.3	858.2	812.6	784.4
30°	836.7	832.7	809.9	750.9	729.4
32.5°	793.8	787.1	763.0	701.3	683.9
35°	749.6	744.2	708.0	654.4	638.3
37.5°	705.3	698.6	653.0	610.1	590.0
40°	661.1	653.0	603.4	564.5	543.1
42.5°	619.5	608.8	560.5	518.9	494.8
45°	575.2	563.2	514.9	472.0	453.2
47.5°	531.0	520.3	476.0	431.8	410.3
50°	484.1	474.7	434.4	390.2	367.4
52.5°	445.2	430.4	391.5	347.3	328.5
55°	399.6	387.5	351.3	309.7	293.7
57.5°	358.0	346.0	312.4	273.5	260.1
60°	319.1	301.7	273.5	240.0	229.3
62.5°	276.2	262.8	238.7	210.5	223.9
65°	237.3	223.9	202.5	206.5	171.6
67.5°	194.4	187.7	169.0	150.2	144.8
70°	158.2	150.2	143.5	123.4	118.0
72.5°	126.0	118.0	108.6	97.9	93.9
75°	95.2	88.5	83.1	79.1	87.2
77.5°	65.7	63.0	59.0	55.0	53.6
80°	42.9	41.6	40.2	38.9	37.5
82.5°	25.5	25.5	25.5	25.5	25.5
85°	13.4	14.7	16.1	17.4	18.8
87.5°	8.0	8.0	9.4	10.7	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)