

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: P562184

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562184
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-81-88-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1984.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

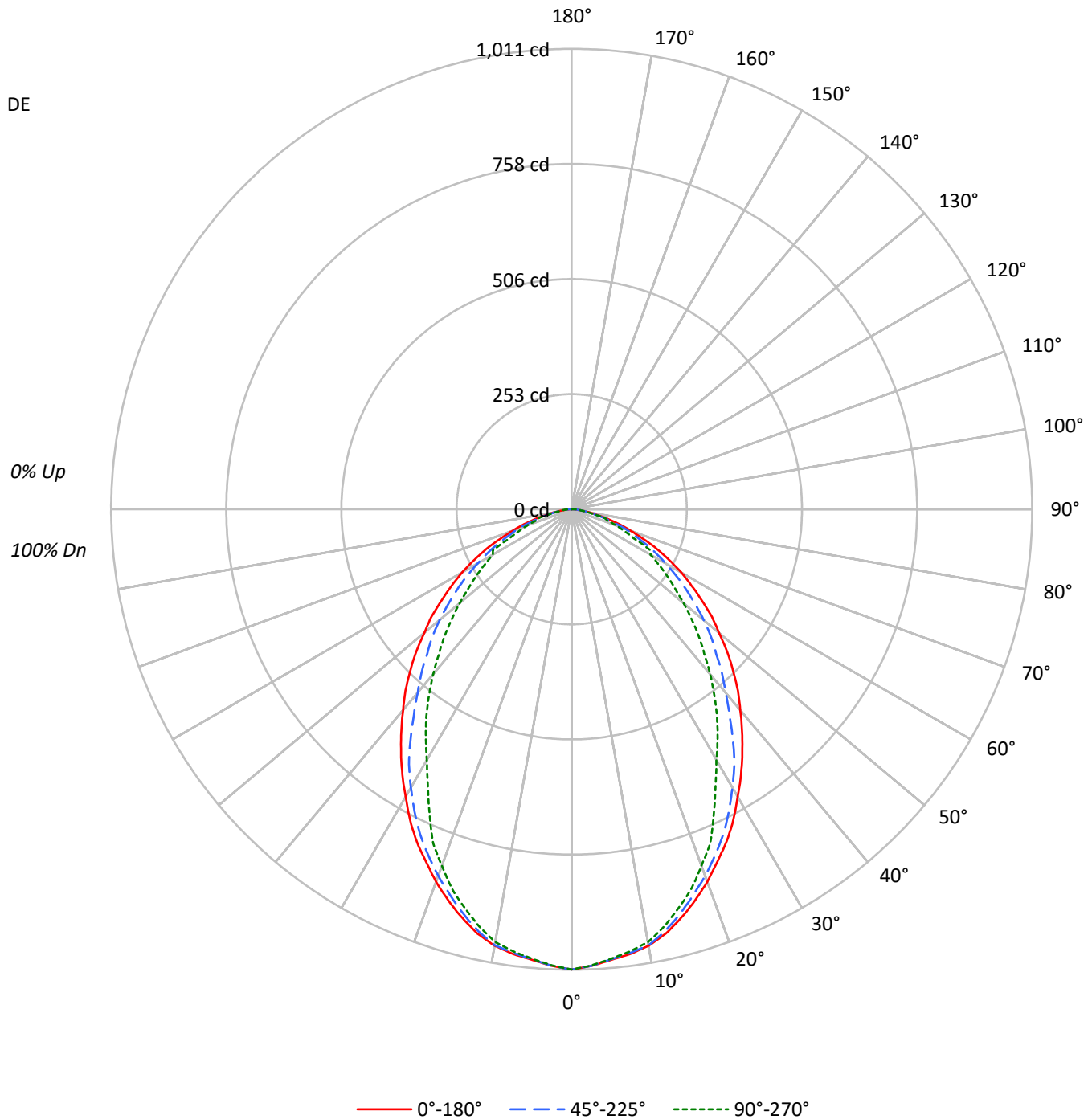
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1360	1360	1360
5°	1341	1340	1338
10°	1330	1328	1319
15°	1294	1281	1263
20°	1246	1226	1193
25°	1195	1169	1096
30°	1133	1096	987
35°	1073	1013	913
40°	1012	924	831
45°	954	854	751
50°	883	792	670
55°	817	718	600
60°	748	641	538
65°	658	562	476
70°	542	492	404
75°	431	376	395
80°	290	272	253
85°	181	216	253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 954 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	4.7
10°-20°	258.2	13.0
20°-30°	357.4	18.0
30°-40°	381.1	19.2
40°-50°	347.7	17.5
50°-60°	272.4	13.7
60°-70°	177.5	8.9
70°-80°	78.6	4.0
80°-90°	16.9	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°	709.7	35.8
0°-40°	1090.8	55.0
0°-60°	1710.9	86.2
0°-90°	1984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	993	992	992	991	991	94
15°	929	929	920	910	907	261
25°	805	800	788	759	738	370
35°	653	648	617	570	556	408
45°	501	491	449	411	395	386
55°	348	338	306	270	256	312
65°	207	195	176	180	150	204
75°	83	77	72	69	76	89
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.6	1010.6	1010.6	1010.6	1010.6
2.5°	1003.6	1003.6	1003.6	1002.4	1002.4
5°	993.1	991.9	991.9	990.8	990.8
7.5°	984.9	983.8	982.6	981.4	979.1
10°	973.2	973.2	972.1	966.2	965.1
12.5°	954.5	953.4	948.7	940.5	938.2
15°	928.8	928.8	919.5	910.1	906.6
17.5°	900.8	899.6	887.9	878.6	873.9
20°	870.4	868.1	856.4	841.2	833.0
22.5°	836.5	836.5	822.5	802.7	794.5
25°	805.0	800.3	787.5	759.4	738.4
27.5°	768.8	761.8	747.7	708.0	683.5
30°	729.1	725.5	705.7	654.3	635.6
32.5°	691.7	685.8	664.8	611.0	595.9
35°	653.1	648.4	616.9	570.2	556.1
37.5°	614.6	608.7	569.0	531.6	514.1
40°	576.0	569.0	525.8	491.9	473.2
42.5°	539.8	530.4	488.4	452.2	431.1
45°	501.2	490.7	448.6	411.3	394.9
47.5°	462.7	453.3	414.8	376.2	357.5
50°	421.8	413.6	378.5	340.0	320.1
52.5°	387.9	375.0	341.2	302.6	286.2
55°	348.2	337.7	306.1	269.9	255.9
57.5°	311.9	301.4	272.2	238.3	226.7
60°	278.1	262.9	238.3	209.1	199.8
62.5°	240.7	229.0	208.0	183.4	195.1
65°	206.8	195.1	176.4	179.9	149.5
67.5°	169.4	163.6	147.2	130.9	126.2
70°	137.9	130.9	125.0	107.5	102.8
72.5°	109.8	102.8	94.6	85.3	81.8
75°	83.0	77.1	72.4	68.9	75.9
77.5°	57.2	54.9	51.4	47.9	46.7
80°	37.4	36.2	35.1	33.9	32.7
82.5°	22.2	22.2	22.2	22.2	22.2
85°	11.7	12.9	14.0	15.2	16.4
87.5°	7.0	7.0	8.2	9.3	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)