

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: P562192

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562192
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-82-84-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2300.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

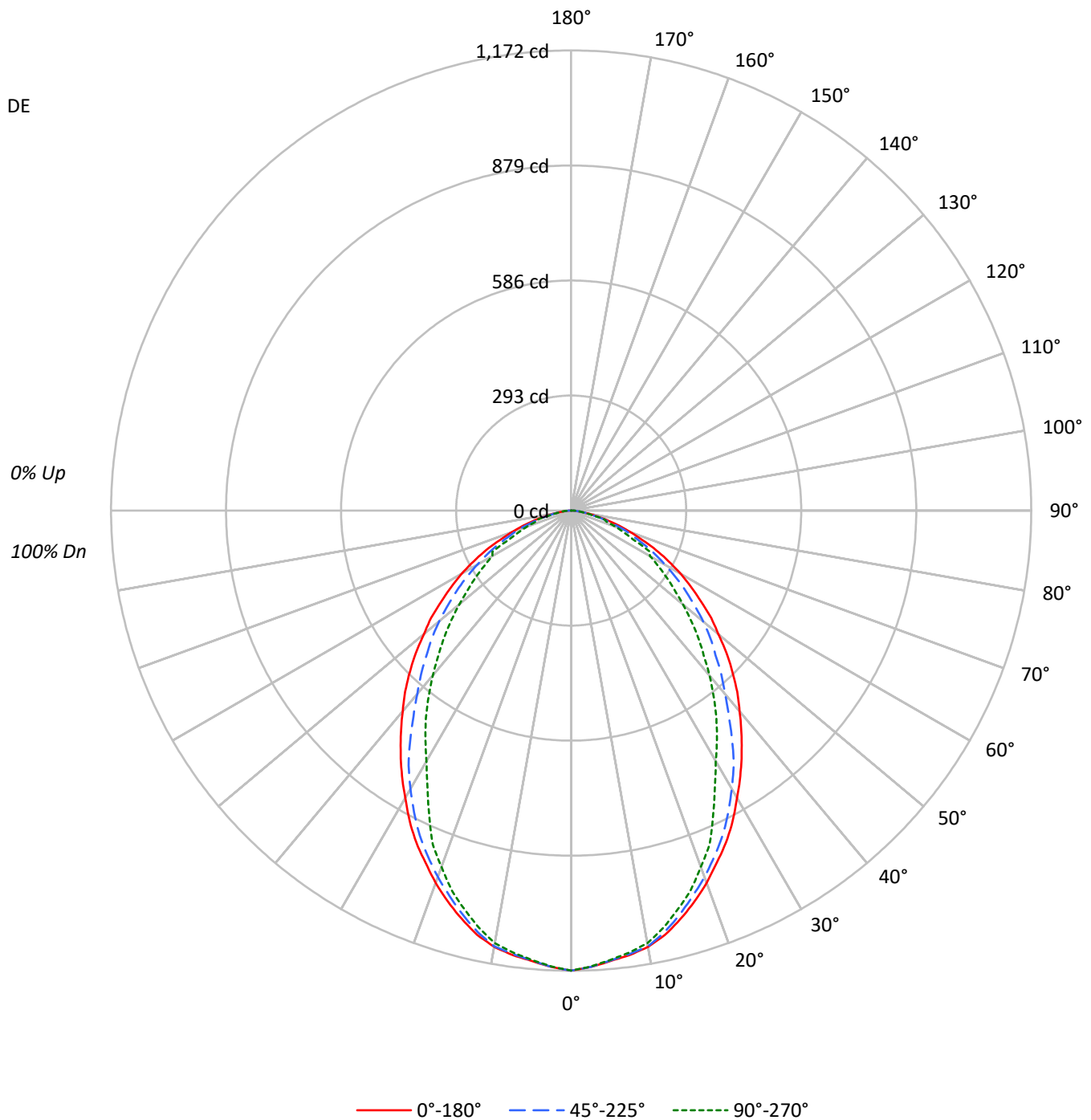
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1576	1576	1576
5°	1555	1553	1551
10°	1541	1540	1529
15°	1500	1485	1464
20°	1445	1422	1383
25°	1385	1355	1271
30°	1313	1271	1145
35°	1244	1175	1059
40°	1173	1071	963
45°	1106	990	871
50°	1024	919	777
55°	947	833	696
60°	868	744	623
65°	763	651	552
70°	629	570	469
75°	500	437	457
80°	336	315	294
85°	208	252	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1106 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.1	4.7
10°-20°	299.3	13.0
20°-30°	414.4	18.0
30°-40°	441.8	19.2
40°-50°	403.1	17.5
50°-60°	315.8	13.7
60°-70°	205.8	8.9
70°-80°	91.2	4.0
80°-90°	19.6	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°	822.7	35.8
0°-40°	1264.6	55.0
0°-60°	1983.4	86.2
0°-90°	2300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2300.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1151	1150	1150	1149	1149	109
15°	1077	1077	1066	1055	1051	303
25°	933	928	913	880	856	428
35°	757	752	715	661	645	473
45°	581	569	520	477	458	448
55°	404	391	355	313	297	362
65°	240	226	204	209	173	236
75°	96	89	84	80	88	103
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1171.6	1171.6	1171.6	1171.6	1171.6
2.5°	1163.5	1163.5	1163.5	1162.1	1162.1
5°	1151.3	1149.9	1149.9	1148.6	1148.6
7.5°	1141.8	1140.4	1139.1	1137.7	1135.0
10°	1128.2	1128.2	1126.9	1120.1	1118.8
12.5°	1106.6	1105.2	1099.8	1090.3	1087.6
15°	1076.8	1076.8	1065.9	1055.1	1051.0
17.5°	1044.3	1042.9	1029.4	1018.5	1013.1
20°	1009.1	1006.3	992.8	975.2	965.7
22.5°	969.8	969.8	953.5	930.5	921.0
25°	933.2	927.8	912.9	880.4	856.0
27.5°	891.2	883.1	866.8	820.8	792.3
30°	845.2	841.1	818.1	758.5	736.8
32.5°	801.8	795.1	770.7	708.4	690.8
35°	757.1	751.7	715.1	661.0	644.7
37.5°	712.4	705.7	659.6	616.3	596.0
40°	667.7	659.6	609.5	570.2	548.5
42.5°	625.8	614.9	566.2	524.2	499.8
45°	581.1	568.9	520.1	476.8	457.8
47.5°	536.4	525.5	480.8	436.1	414.5
50°	489.0	479.5	438.8	394.1	371.1
52.5°	449.7	434.8	395.5	350.8	331.8
55°	403.6	391.4	354.9	312.9	296.6
57.5°	361.6	349.4	315.6	276.3	262.8
60°	322.4	304.7	276.3	242.4	231.6
62.5°	279.0	265.5	241.1	212.6	226.2
65°	239.7	226.2	204.5	208.6	173.4
67.5°	196.4	189.6	170.7	151.7	146.3
70°	159.8	151.7	144.9	124.6	119.2
72.5°	127.3	119.2	109.7	98.9	94.8
75°	96.2	89.4	84.0	79.9	88.0
77.5°	66.4	63.7	59.6	55.5	54.2
80°	43.3	42.0	40.6	39.3	37.9
82.5°	25.7	25.7	25.7	25.7	25.7
85°	13.5	14.9	16.3	17.6	19.0
87.5°	8.1	8.1	9.5	10.8	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)