

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: P562224

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562224
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-50-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2604.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

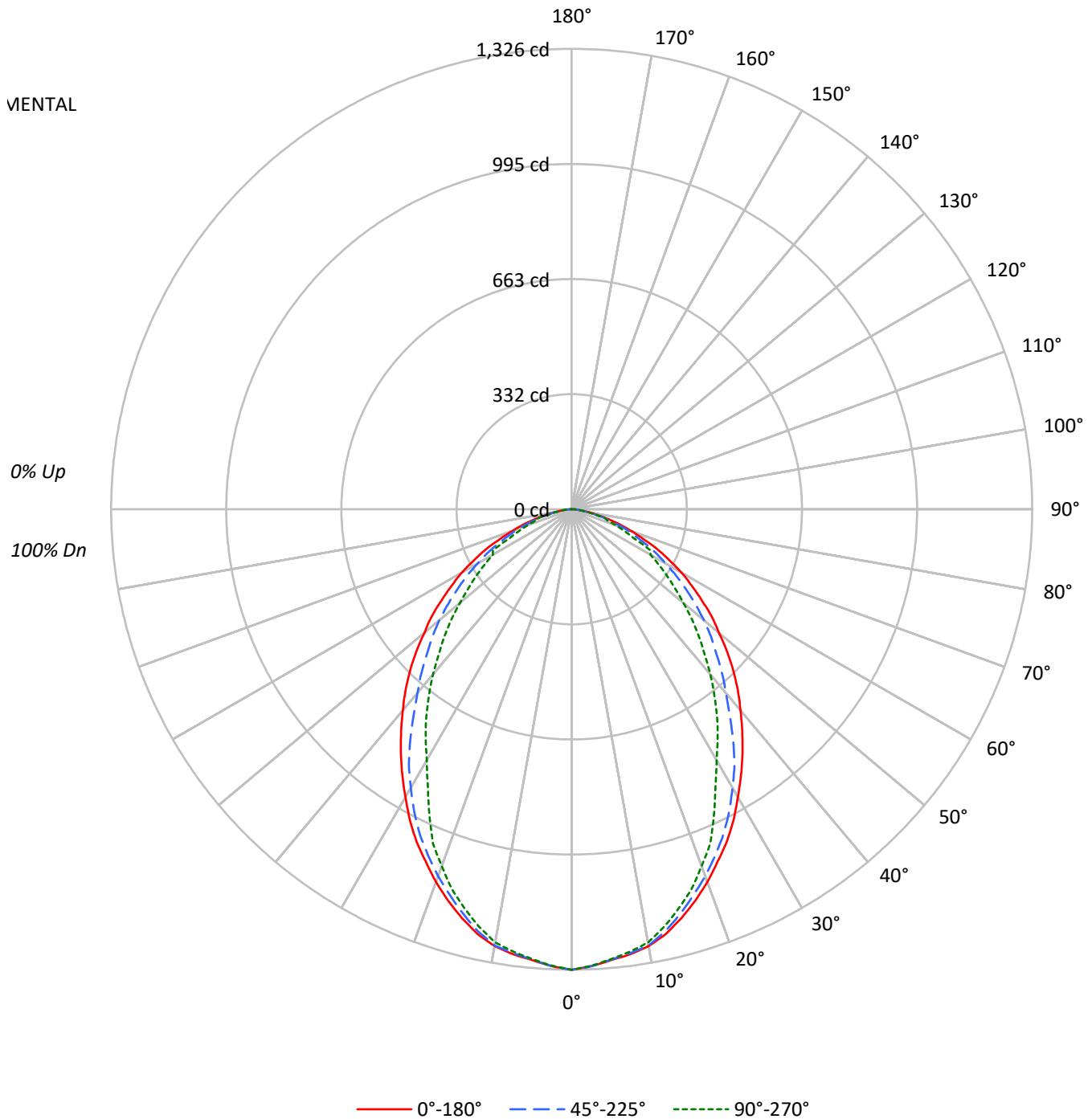
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1785	1785	1785
5°	1760	1758	1756
10°	1745	1743	1730
15°	1698	1681	1658
20°	1636	1609	1566
25°	1569	1534	1439
30°	1487	1439	1296
35°	1408	1330	1199
40°	1328	1212	1091
45°	1252	1120	986
50°	1159	1040	880
55°	1072	943	788
60°	982	842	706
65°	864	737	625
70°	712	646	531
75°	566	494	518
80°	380	356	332
85°	236	284	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1252 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.5	4.7
10°-20°	338.9	13.0
20°-30°	469.1	18.0
30°-40°	500.2	19.2
40°-50°	456.4	17.5
50°-60°	357.5	13.7
60°-70°	233.0	8.9
70°-80°	103.2	4.0
80°-90°	22.2	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°	931.5	35.8
0°-40°	1431.7	55.0
0°-60°	2245.6	86.2
0°-90°	2604.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2604.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1303	1302	1302	1300	1300	124
15°	1219	1219	1207	1195	1190	343
25°	1057	1050	1034	997	969	485
35°	857	851	810	748	730	536
45°	658	644	589	540	518	507
55°	457	443	402	354	336	410
65°	271	256	232	236	196	267
75°	109	101	95	90	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1326.4	1326.4	1326.4	1326.4	1326.4
2.5°	1317.2	1317.2	1317.2	1315.7	1315.7
5°	1303.4	1301.9	1301.9	1300.4	1300.4
7.5°	1292.7	1291.2	1289.6	1288.1	1285.0
10°	1277.4	1277.4	1275.8	1268.2	1266.6
12.5°	1252.8	1251.3	1245.2	1234.4	1231.4
15°	1219.1	1219.1	1206.8	1194.6	1190.0
17.5°	1182.3	1180.8	1165.4	1153.2	1147.0
20°	1142.4	1139.4	1124.0	1104.1	1093.4
22.5°	1098.0	1098.0	1079.6	1053.5	1042.8
25°	1056.6	1050.4	1033.6	996.7	969.1
27.5°	1009.0	999.8	981.4	929.3	897.1
30°	956.9	952.3	926.2	858.7	834.2
32.5°	907.8	900.1	872.5	802.0	782.1
35°	857.2	851.1	809.7	748.3	729.9
37.5°	806.6	798.9	746.8	697.7	674.7
40°	756.0	746.8	690.1	645.6	621.1
42.5°	708.5	696.2	641.0	593.4	565.8
45°	657.9	644.1	588.8	539.8	518.3
47.5°	607.3	595.0	544.4	493.8	469.2
50°	553.6	542.8	496.8	446.2	420.2
52.5°	509.1	492.2	447.8	397.2	375.7
55°	457.0	443.2	401.8	354.2	335.8
57.5°	409.4	395.6	357.3	312.8	297.5
60°	365.0	345.0	312.8	274.5	262.2
62.5°	315.9	300.6	273.0	240.8	256.1
65°	271.4	256.1	231.6	236.2	196.3
67.5°	222.4	214.7	193.2	171.7	165.6
70°	180.9	171.7	164.1	141.1	134.9
72.5°	144.1	134.9	124.2	111.9	107.3
75°	108.9	101.2	95.1	90.5	99.7
77.5°	75.1	72.1	67.5	62.9	61.3
80°	49.1	47.5	46.0	44.5	42.9
82.5°	29.1	29.1	29.1	29.1	29.1
85°	15.3	16.9	18.4	19.9	21.5
87.5°	9.2	9.2	10.7	12.3	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)