

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: P561085

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561085
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-12-4-LD4-1LO-50-UNV-80-96-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

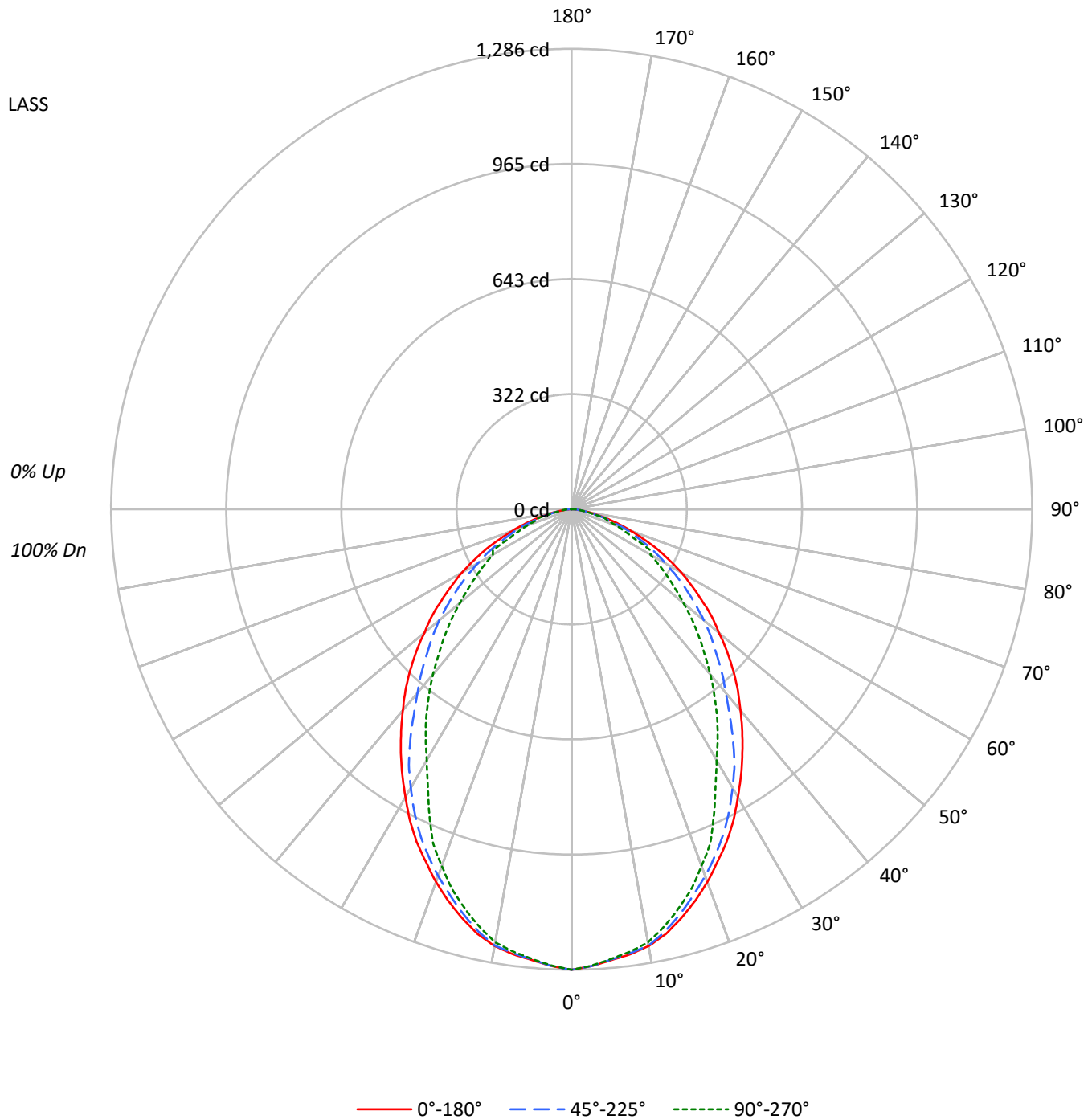
Lumens per Lamp: N/A
Luminaire Lumens: 2525.0 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3461	3461	3461
5°	3414	3410	3406
10°	3384	3380	3356
15°	3293	3260	3215
20°	3172	3121	3036
25°	3042	2976	2790
30°	2883	2791	2513
35°	2731	2579	2325
40°	2575	2350	2115
45°	2428	2173	1913
50°	2247	2017	1706
55°	2079	1828	1528
60°	1905	1632	1369
65°	1676	1429	1212
70°	1381	1252	1030
75°	1098	959	1005
80°	738	691	645
85°	460	550	642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2428 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	4.7
10°-20°	328.6	13.0
20°-30°	454.9	18.0
30°-40°	485.1	19.2
40°-50°	442.5	17.5
50°-60°	346.7	13.7
60°-70°	225.9	8.9
70°-80°	100.1	4.0
80°-90°	21.5	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°	903.2	35.8
0°-40°	1388.3	55.0
0°-60°	2177.5	86.2
0°-90°	2525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1286	1286	1286	1286	1286	
5°	1264	1262	1262	1261	1261	120
15°	1182	1182	1170	1158	1154	332
25°	1024	1019	1002	966	940	470
35°	831	825	785	726	708	520
45°	638	624	571	523	503	491
55°	443	430	390	344	326	397
65°	263	248	224	229	190	259
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1286.2	1286.2	1286.2	1286.2	1286.2
2.5°	1277.3	1277.3	1277.3	1275.8	1275.8
5°	1263.9	1262.4	1262.4	1260.9	1260.9
7.5°	1253.5	1252.0	1250.5	1249.0	1246.1
10°	1238.6	1238.6	1237.1	1229.7	1228.2
12.5°	1214.8	1213.3	1207.4	1197.0	1194.0
15°	1182.1	1182.1	1170.2	1158.3	1153.9
17.5°	1146.4	1144.9	1130.1	1118.2	1112.2
20°	1107.8	1104.8	1089.9	1070.6	1060.2
22.5°	1064.6	1064.6	1046.8	1021.5	1011.1
25°	1024.5	1018.6	1002.2	966.5	939.7
27.5°	978.4	969.5	951.6	901.1	869.9
30°	927.8	923.4	898.1	832.7	808.9
32.5°	880.3	872.8	846.1	777.7	758.3
35°	831.2	825.3	785.1	725.6	707.8
37.5°	782.1	774.7	724.1	676.6	654.3
40°	733.1	724.1	669.1	626.0	602.2
42.5°	687.0	675.1	621.5	575.4	548.7
45°	637.9	624.5	571.0	523.4	502.6
47.5°	588.8	576.9	527.9	478.8	455.0
50°	536.8	526.4	481.8	432.7	407.4
52.5°	493.7	477.3	434.2	385.1	364.3
55°	443.1	429.7	389.6	343.5	325.6
57.5°	397.0	383.6	346.5	303.3	288.5
60°	353.9	334.6	303.3	266.2	254.3
62.5°	306.3	291.4	264.7	233.4	248.3
65°	263.2	248.3	224.5	229.0	190.3
67.5°	215.6	208.2	187.4	166.5	160.6
70°	175.5	166.5	159.1	136.8	130.9
72.5°	139.8	130.9	120.4	108.5	104.1
75°	105.6	98.1	92.2	87.7	96.7
77.5°	72.9	69.9	65.4	61.0	59.5
80°	47.6	46.1	44.6	43.1	41.6
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.8	19.3	20.8
87.5°	8.9	8.9	10.4	11.9	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)