

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: P562233

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562233
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-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

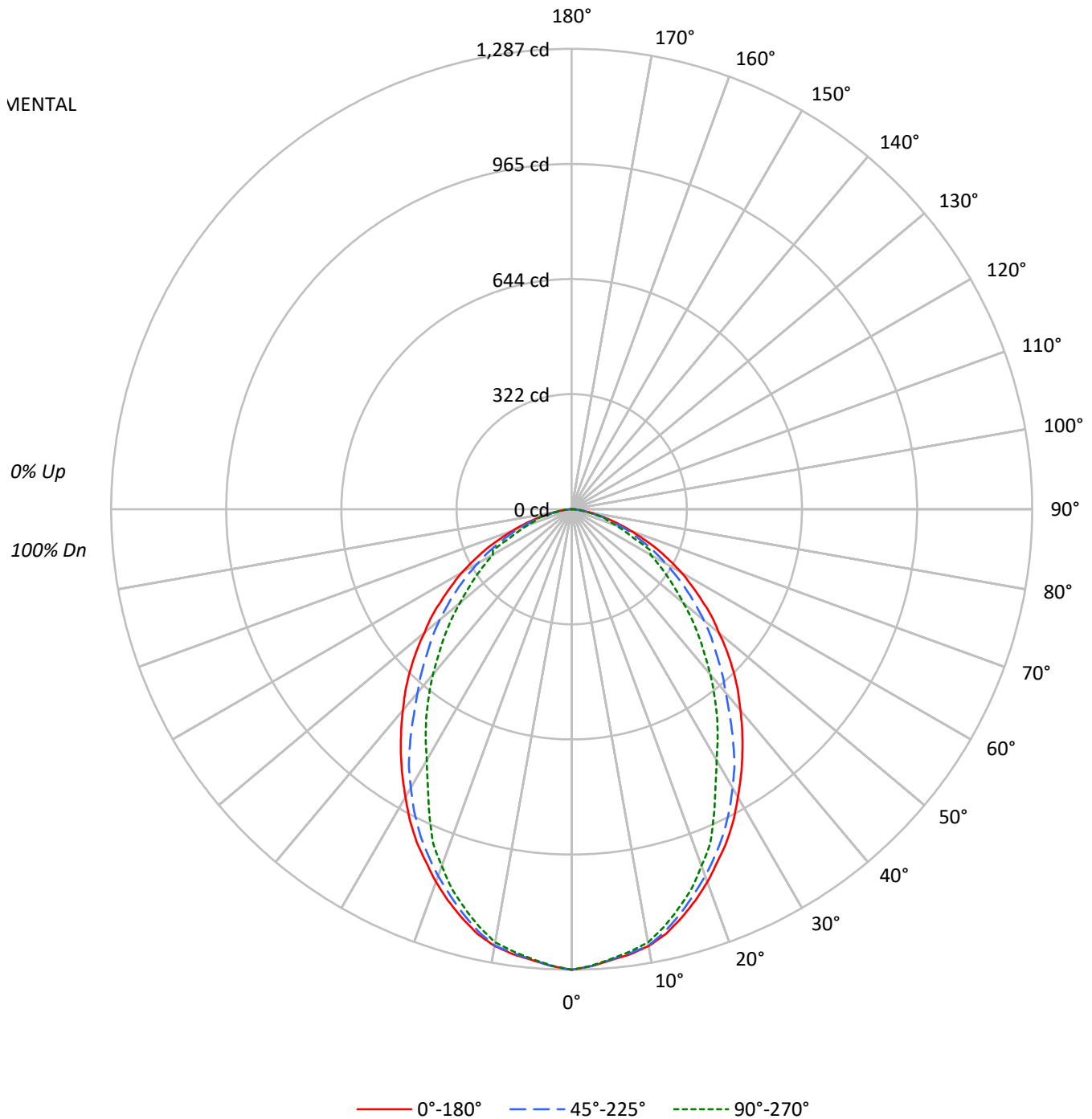
Lumens per Lamp: N/A
Luminaire Lumens: 2527.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1732	1732	1732
5°	1708	1706	1704
10°	1694	1692	1679
15°	1648	1631	1609
20°	1587	1562	1519
25°	1522	1489	1396
30°	1443	1396	1258
35°	1366	1291	1163
40°	1289	1176	1059
45°	1215	1087	957
50°	1124	1009	853
55°	1040	915	764
60°	953	817	685
65°	839	715	606
70°	691	626	515
75°	549	480	503
80°	369	346	323
85°	230	276	321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1215 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.8	4.7
10°-20°	328.8	13.0
20°-30°	455.3	18.0
30°-40°	485.4	19.2
40°-50°	442.9	17.5
50°-60°	347.0	13.7
60°-70°	226.1	8.9
70°-80°	100.2	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°	903.9	35.8
0°-40°	1389.4	55.0
0°-60°	2179.2	86.2
0°-90°	2527.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2527.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1265	1263	1263	1262	1262	120
15°	1183	1183	1171	1159	1155	333
25°	1025	1019	1003	967	940	471
35°	832	826	786	726	708	520
45°	638	625	571	524	503	492
55°	444	430	390	344	326	398
65°	263	248	225	229	190	260
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°	1287.2	1287.2	1287.2	1287.2	1287.2
2.5°	1278.3	1278.3	1278.3	1276.8	1276.8
5°	1264.9	1263.4	1263.4	1261.9	1261.9
7.5°	1254.5	1253.0	1251.5	1250.0	1247.0
10°	1239.6	1239.6	1238.1	1230.7	1229.2
12.5°	1215.8	1214.3	1208.3	1197.9	1195.0
15°	1183.1	1183.1	1171.1	1159.2	1154.8
17.5°	1147.3	1145.8	1131.0	1119.1	1113.1
20°	1108.6	1105.7	1090.8	1071.4	1061.0
22.5°	1065.5	1065.5	1047.6	1022.3	1011.9
25°	1025.3	1019.4	1003.0	967.3	940.5
27.5°	979.2	970.3	952.4	901.8	870.5
30°	928.6	924.1	898.8	833.3	809.5
32.5°	881.0	873.5	846.7	778.3	758.9
35°	831.9	825.9	785.7	726.2	708.3
37.5°	782.7	775.3	724.7	677.1	654.8
40°	733.6	724.7	669.7	626.5	602.7
42.5°	687.5	675.6	622.0	575.9	549.1
45°	638.4	625.0	571.4	523.8	503.0
47.5°	589.3	577.4	528.3	479.2	455.4
50°	537.2	526.8	482.1	433.0	407.7
52.5°	494.1	477.7	434.5	385.4	364.6
55°	443.5	430.1	389.9	343.8	325.9
57.5°	397.3	383.9	346.7	303.6	288.7
60°	354.2	334.8	303.6	266.4	254.5
62.5°	306.6	291.7	264.9	233.6	248.5
65°	263.4	248.5	224.7	229.2	190.5
67.5°	215.8	208.3	187.5	166.7	160.7
70°	175.6	166.7	159.2	136.9	131.0
72.5°	139.9	131.0	120.5	108.6	104.2
75°	105.7	98.2	92.3	87.8	96.7
77.5°	72.9	69.9	65.5	61.0	59.5
80°	47.6	46.1	44.6	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	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)