

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: P589945

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-80-88-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P589945  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-1LO-35-UNV-80-88-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

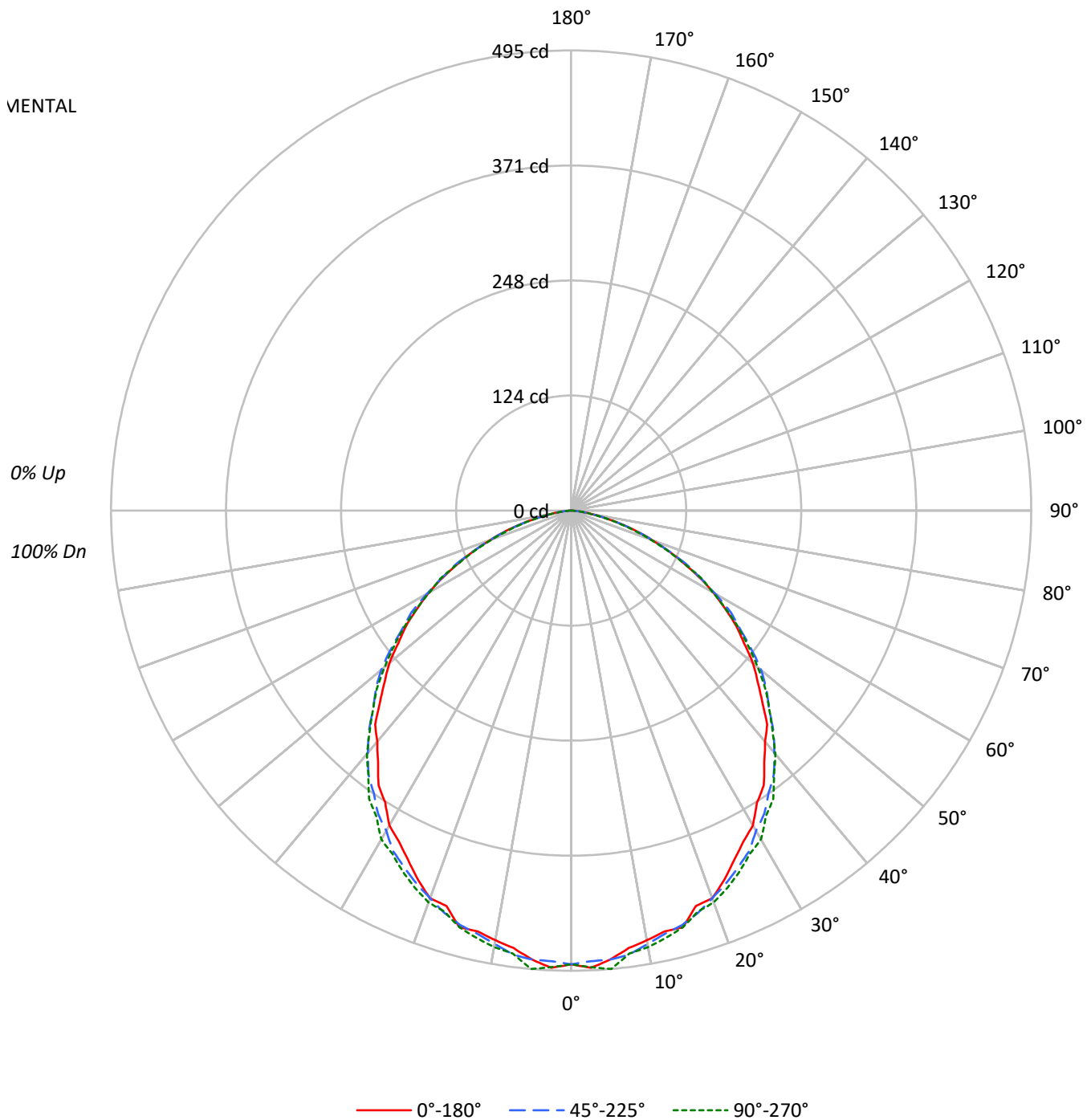
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1230.0 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1313	1313	1313
5°	1309	1310	1337
10°	1282	1294	1303
15°	1293	1285	1293
20°	1271	1271	1284
25°	1232	1259	1272
30°	1215	1236	1269
35°	1186	1217	1244
40°	1140	1195	1200
45°	1106	1145	1147
50°	1069	1117	1096
55°	1019	1039	1031
60°	953	962	945
65°	849	871	844
70°	729	731	711
75°	577	576	553
80°	387	377	361
85°	210	207	195

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 1174 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.9	3.7
10°-20°	130.1	10.6
20°-30°	194.9	15.8
30°-40°	231.0	18.8
40°-50°	231.5	18.8
50°-60°	196.5	16.0
60°-70°	132.5	10.8
70°-80°	58.2	4.7
80°-90°	9.5	0.8
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°	370.9	30.2
0°-40°	602.0	48.9
0°-60°	1029.9	83.7
0°-90°	1230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1230.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	485	483	485	483	495	46
15°	464	459	461	464	464	129
25°	415	417	424	429	428	192
35°	361	362	370	379	379	224
45°	290	296	301	309	301	225
55°	217	216	221	220	220	193
65°	133	132	137	132	132	133
75°	56	54	55	52	53	60
85°	7	7	7	7	6	10
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	488.0	488.0	488.0	488.0	488.0
2.5°	492.3	488.5	485.1	489.1	491.6
5°	484.6	483.4	484.8	483.3	495.0
7.5°	474.6	479.0	481.5	479.9	480.6
10°	469.3	467.8	473.4	477.3	476.8
12.5°	463.6	465.9	466.2	470.5	470.8
15°	464.0	458.6	461.4	463.8	464.0
17.5°	445.9	451.7	453.7	459.2	452.4
20°	443.7	439.5	443.7	449.3	448.5
22.5°	430.2	425.5	434.5	439.5	439.2
25°	414.8	417.1	423.9	429.4	428.5
27.5°	401.3	404.0	413.7	421.3	416.4
30°	390.9	389.6	397.8	404.6	408.4
32.5°	372.3	377.1	386.7	393.5	389.9
35°	361.1	362.1	370.5	379.1	378.8
37.5°	341.3	346.3	358.1	360.5	358.3
40°	324.5	329.5	340.1	342.7	341.7
42.5°	312.1	313.0	322.1	325.1	320.4
45°	290.5	295.9	300.8	308.6	301.3
47.5°	272.1	274.6	285.2	287.3	283.4
50°	255.4	256.3	266.9	264.3	261.8
52.5°	234.4	238.1	244.1	243.6	240.6
55°	217.1	215.7	221.4	219.9	219.8
57.5°	196.4	198.9	203.6	201.2	197.4
60°	177.0	177.1	178.8	176.1	175.6
62.5°	155.4	156.1	156.5	153.2	158.6
65°	133.4	131.6	136.8	131.6	132.5
67.5°	113.2	114.1	113.5	110.3	111.5
70°	92.6	93.8	92.9	89.2	90.4
72.5°	73.9	72.5	73.3	68.7	70.8
75°	55.5	54.4	55.4	51.5	53.2
77.5°	37.8	38.7	38.1	36.0	37.2
80°	25.0	24.3	24.3	23.1	23.3
82.5°	14.6	13.9	13.7	13.3	13.9
85°	6.8	6.6	6.7	6.6	6.3
87.5°	2.5	2.5	2.5	2.4	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)