

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: P590298

Luminaire Tested: FSR-24-2-LD4-2LO-50-UNV-80-94-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590298  
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-LD4-2LO-50-UNV-80-94-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

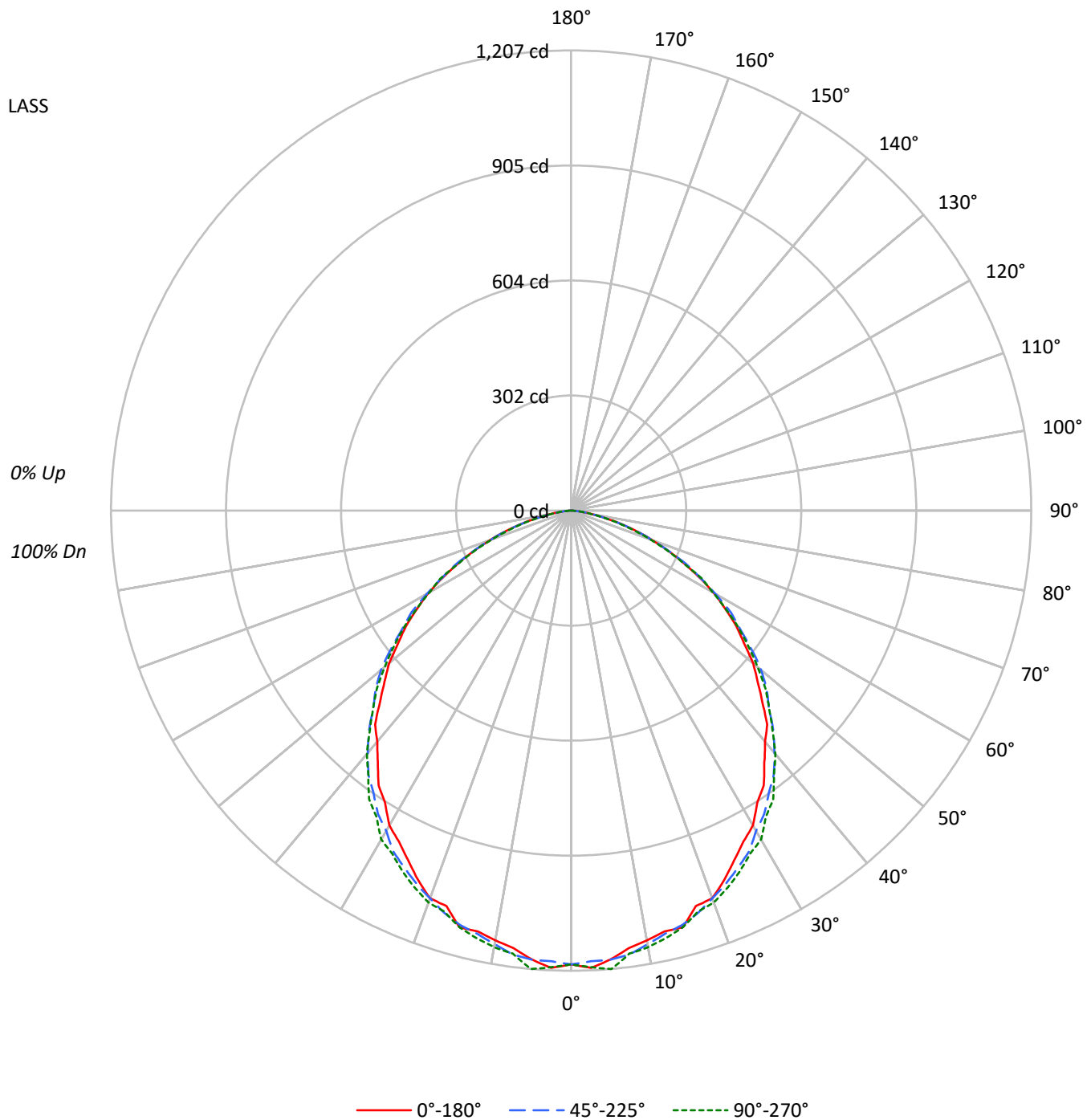
Lumens per Lamp: N/A  
Luminaire Lumens: 3000.0 lumens  
Efficiency: N/A  
Efficacy: 128.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
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	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°	3203	3203	3203
5°	3193	3194	3261
10°	3128	3155	3177
15°	3153	3136	3153
20°	3099	3099	3132
25°	3004	3070	3103
30°	2963	3015	3095
35°	2893	2969	3035
40°	2780	2914	2927
45°	2696	2792	2796
50°	2608	2725	2673
55°	2485	2533	2515
60°	2323	2347	2305
65°	2072	2125	2057
70°	1777	1784	1734
75°	1408	1405	1351
80°	944	917	882
85°	513	506	475

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 2864 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.0	3.7
10°-20°	317.3	10.6
20°-30°	475.4	15.8
30°-40°	563.5	18.8
40°-50°	564.5	18.8
50°-60°	479.2	16.0
60°-70°	323.1	10.8
70°-80°	142.0	4.7
80°-90°	23.1	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°	904.7	30.2
0°-40°	1468.2	48.9
0°-60°	2511.9	83.7
0°-90°	3000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1190	1190	1190	1190	1190	
5°	1182	1179	1182	1179	1207	111
15°	1132	1119	1126	1131	1132	315
25°	1012	1017	1034	1047	1045	468
35°	881	883	904	925	924	547
45°	708	722	734	753	735	548
55°	530	526	540	536	536	471
65°	325	321	334	321	323	324
75°	135	133	135	126	130	145
85°	17	16	16	16	15	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1190.3	1190.3	1190.3	1190.3	1190.3
2.5°	1200.6	1191.6	1183.1	1192.9	1198.9
5°	1181.9	1179.1	1182.3	1178.8	1207.2
7.5°	1157.6	1168.2	1174.3	1170.5	1172.2
10°	1144.7	1141.0	1154.7	1164.2	1162.8
12.5°	1130.8	1136.4	1137.1	1147.4	1148.4
15°	1131.6	1118.6	1125.5	1131.3	1131.8
17.5°	1087.7	1101.8	1106.6	1119.9	1103.3
20°	1082.3	1072.0	1082.3	1096.0	1093.8
22.5°	1049.2	1037.7	1059.8	1072.0	1071.2
25°	1011.7	1017.3	1033.9	1047.4	1045.2
27.5°	978.8	985.3	1009.0	1027.6	1015.6
30°	953.5	950.3	970.2	986.8	996.1
32.5°	908.2	919.8	943.2	959.6	950.9
35°	880.6	883.3	903.7	924.6	924.0
37.5°	832.5	844.7	873.4	879.3	873.9
40°	791.5	803.6	829.6	835.9	833.3
42.5°	761.2	763.4	785.7	792.9	781.4
45°	708.5	721.7	733.7	752.6	734.8
47.5°	663.6	669.8	695.6	700.7	691.3
50°	622.9	625.1	651.0	644.7	638.6
52.5°	571.7	580.8	595.4	594.2	586.9
55°	529.6	526.1	539.9	536.2	536.1
57.5°	479.0	485.2	496.6	490.7	481.4
60°	431.7	431.9	436.0	429.4	428.2
62.5°	379.0	380.8	381.8	373.6	386.8
65°	325.4	321.1	333.7	320.9	323.1
67.5°	276.0	278.2	276.9	269.0	272.0
70°	225.9	228.7	226.7	217.6	220.4
72.5°	180.1	176.7	178.9	167.5	172.7
75°	135.4	132.6	135.1	125.6	129.9
77.5°	92.2	94.4	92.8	87.8	90.7
80°	60.9	59.2	59.2	56.3	56.9
82.5°	35.5	33.8	33.4	32.4	33.8
85°	16.6	16.1	16.4	16.0	15.4
87.5°	6.0	6.1	6.1	5.8	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)