

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: P561908

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P561908  
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-24-2-LD4-1LO-35-UNV-80-86-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

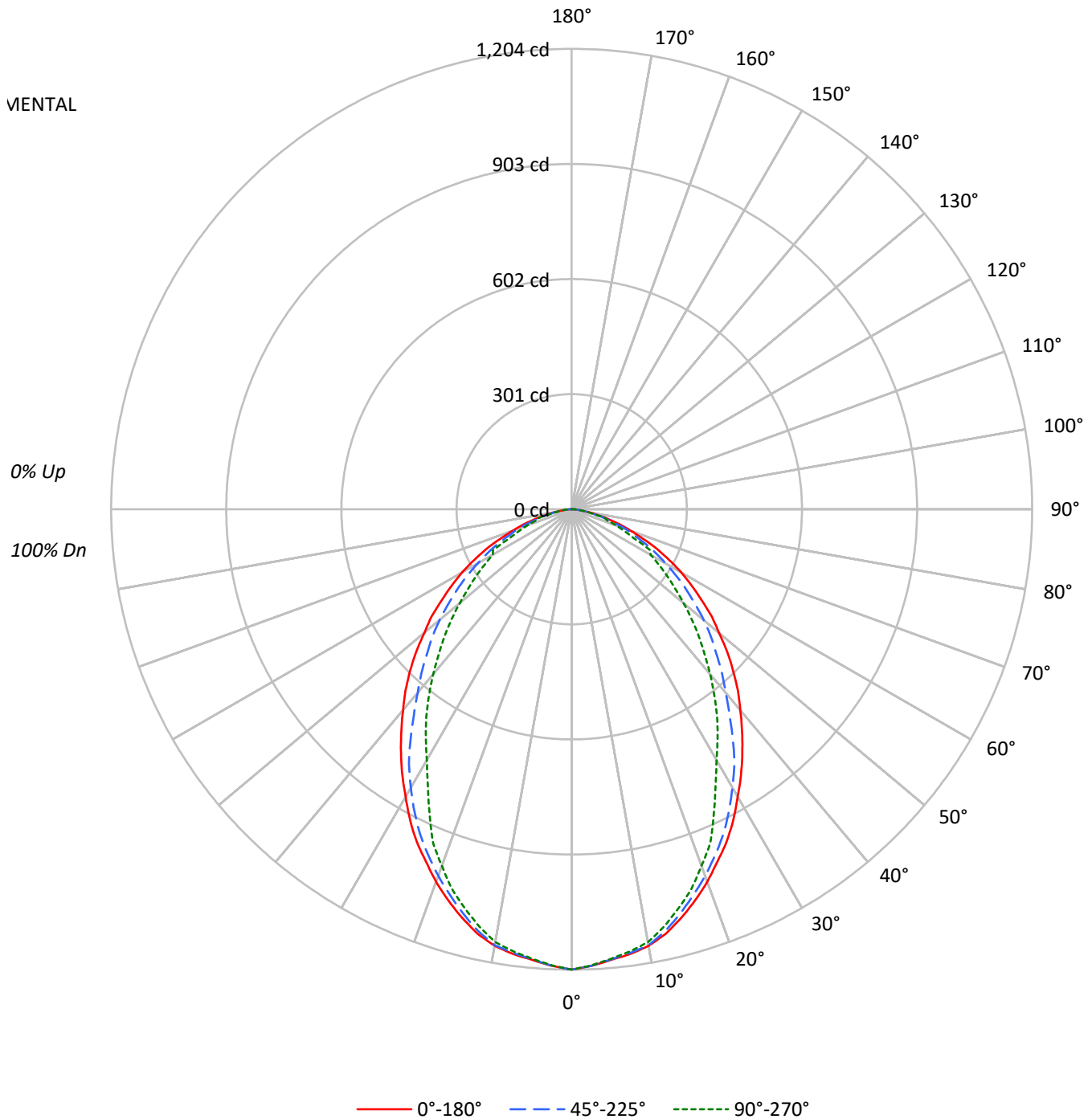
Lumens per Lamp: N/A  
Luminaire Lumens: 2363.0 lumens  
Efficiency: N/A  
Efficacy: 101.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	1620	1620	1620
5°	1598	1596	1594
10°	1584	1582	1570
15°	1541	1525	1504
20°	1484	1460	1421
25°	1423	1392	1306
30°	1349	1306	1176
35°	1278	1207	1088
40°	1205	1100	990
45°	1136	1017	895
50°	1051	944	798
55°	973	855	715
60°	891	764	640
65°	784	669	567
70°	646	586	482
75°	514	449	470
80°	345	323	302
85°	215	258	301

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1136 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.0	4.7
10°-20°	307.5	13.0
20°-30°	425.7	18.0
30°-40°	453.9	19.2
40°-50°	414.1	17.5
50°-60°	324.4	13.7
60°-70°	211.5	8.9
70°-80°	93.7	4.0
80°-90°	20.1	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
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0°-30°	845.3	35.8
0°-40°	1299.2	55.0
0°-60°	2037.8	86.2
0°-90°	2363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2363.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1204	1204	1204	1204	1204	
5°	1183	1181	1181	1180	1180	112
15°	1106	1106	1095	1084	1080	311
25°	959	953	938	904	880	440
35°	778	772	735	679	662	486
45°	597	584	534	490	470	460
55°	415	402	365	321	305	372
65°	246	232	210	214	178	243
75°	99	92	86	82	90	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1203.7	1203.7	1203.7	1203.7	1203.7
2.5°	1195.3	1195.3	1195.3	1193.9	1193.9
5°	1182.8	1181.4	1181.4	1180.0	1180.0
7.5°	1173.1	1171.7	1170.3	1168.9	1166.1
10°	1159.2	1159.2	1157.8	1150.8	1149.4
12.5°	1136.9	1135.5	1129.9	1120.2	1117.4
15°	1106.3	1106.3	1095.1	1084.0	1079.8
17.5°	1072.9	1071.5	1057.6	1046.4	1040.9
20°	1036.7	1033.9	1020.0	1001.9	992.2
22.5°	996.3	996.3	979.6	956.0	946.2
25°	958.8	953.2	937.9	904.5	879.5
27.5°	915.6	907.3	890.6	843.3	814.0
30°	868.3	864.1	840.5	779.3	757.0
32.5°	823.8	816.8	791.8	727.8	709.7
35°	777.9	772.3	734.7	679.1	662.4
37.5°	731.9	725.0	677.7	633.1	612.3
40°	686.0	677.7	626.2	585.8	563.6
42.5°	642.9	631.8	581.7	538.5	513.5
45°	597.0	584.4	534.4	489.8	470.3
47.5°	551.0	539.9	494.0	448.1	425.8
50°	502.3	492.6	450.9	404.9	381.3
52.5°	462.0	446.7	406.3	360.4	340.9
55°	414.7	402.2	364.6	321.4	304.7
57.5°	371.5	359.0	324.2	283.9	270.0
60°	331.2	313.1	283.9	249.1	238.0
62.5°	286.7	272.7	247.7	218.5	232.4
65°	246.3	232.4	210.1	214.3	178.1
67.5°	201.8	194.8	175.3	155.9	150.3
70°	164.2	155.9	148.9	128.0	122.5
72.5°	130.8	122.5	112.7	101.6	97.4
75°	98.8	91.8	86.3	82.1	90.4
77.5°	68.2	65.4	61.2	57.1	55.7
80°	44.5	43.1	41.7	40.4	39.0
82.5°	26.4	26.4	26.4	26.4	26.4
85°	13.9	15.3	16.7	18.1	19.5
87.5°	8.3	8.3	9.7	11.1	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)