

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: P562292

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562292  
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-LD4-1STD-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**

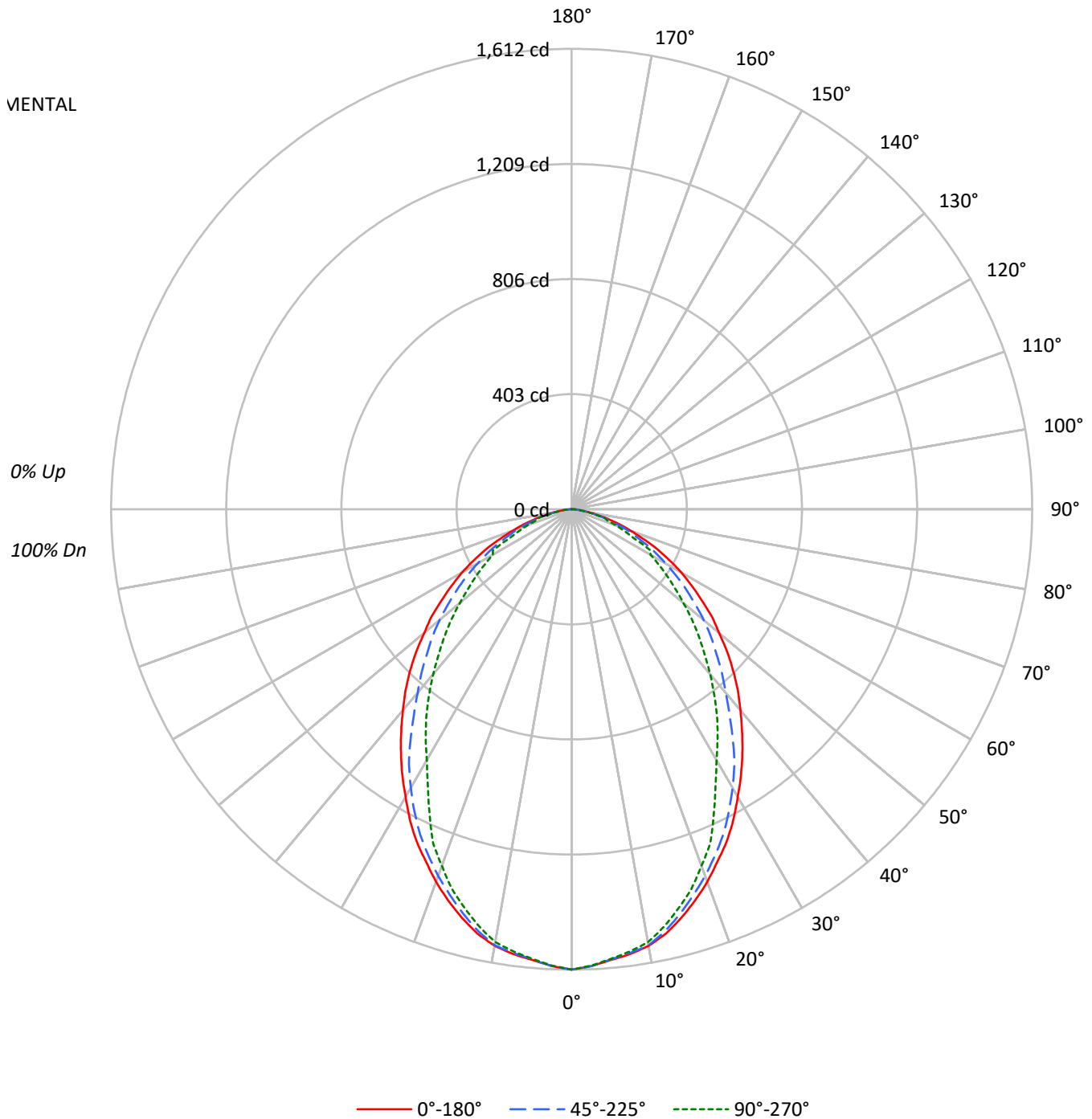
Lumens per Lamp: N/A  
Luminaire Lumens: 3164.0 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2169	2169	2169
5°	2139	2137	2134
10°	2121	2118	2103
15°	2063	2043	2014
20°	1988	1956	1902
25°	1906	1864	1748
30°	1806	1748	1575
35°	1711	1616	1457
40°	1613	1473	1325
45°	1521	1361	1198
50°	1408	1264	1069
55°	1302	1145	957
60°	1193	1023	857
65°	1050	896	759
70°	865	784	645
75°	688	600	630
80°	462	433	404
85°	287	346	403

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1521 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.0	4.7
10°-20°	411.7	13.0
20°-30°	570.0	18.0
30°-40°	607.8	19.2
40°-50°	554.5	17.5
50°-60°	434.4	13.7
60°-70°	283.1	8.9
70°-80°	125.4	4.0
80°-90°	26.9	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°	1131.8	35.8
0°-40°	1739.6	55.0
0°-60°	2728.5	86.2
0°-90°	3164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3164.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1612	1612	1612	1612	1612	
5°	1584	1582	1582	1580	1580	150
15°	1481	1481	1466	1452	1446	416
25°	1284	1276	1256	1211	1178	589
35°	1042	1034	984	909	887	651
45°	799	783	716	656	630	616
55°	555	538	488	430	408	498
65°	330	311	281	287	238	325
75°	132	123	116	110	121	142
85°	19	20	22	24	26	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1611.7	1611.7	1611.7	1611.7	1611.7
2.5°	1600.5	1600.5	1600.5	1598.7	1598.7
5°	1583.8	1581.9	1581.9	1580.0	1580.0
7.5°	1570.7	1568.8	1567.0	1565.1	1561.4
10°	1552.1	1552.1	1550.2	1540.9	1539.0
12.5°	1522.3	1520.4	1512.9	1499.9	1496.2
15°	1481.3	1481.3	1466.4	1451.5	1445.9
17.5°	1436.6	1434.7	1416.1	1401.2	1393.7
20°	1388.1	1384.4	1365.8	1341.5	1328.5
22.5°	1334.1	1334.1	1311.7	1280.0	1267.0
25°	1283.8	1276.3	1255.8	1211.1	1177.6
27.5°	1226.0	1214.8	1192.5	1129.1	1090.0
30°	1162.7	1157.1	1125.4	1043.4	1013.6
32.5°	1103.0	1093.7	1060.2	974.5	950.3
35°	1041.5	1034.1	983.8	909.3	886.9
37.5°	980.1	970.7	907.4	847.8	819.8
40°	918.6	907.4	838.5	784.4	754.6
42.5°	860.8	845.9	778.8	721.1	687.5
45°	799.3	782.6	715.5	655.9	629.8
47.5°	737.8	722.9	661.4	600.0	570.2
50°	672.6	659.6	603.7	542.2	510.5
52.5°	618.6	598.1	544.1	482.6	456.5
55°	555.2	538.5	488.2	430.4	408.0
57.5°	497.5	480.7	434.1	380.1	361.5
60°	443.5	419.2	380.1	333.5	318.6
62.5°	383.8	365.2	331.7	292.5	311.2
65°	329.8	311.2	281.3	286.9	238.5
67.5°	270.2	260.9	234.8	208.7	201.2
70°	219.9	208.7	199.4	171.4	164.0
72.5°	175.1	164.0	150.9	136.0	130.4
75°	132.3	123.0	115.5	109.9	121.1
77.5°	91.3	87.6	82.0	76.4	74.5
80°	59.6	57.8	55.9	54.0	52.2
82.5°	35.4	35.4	35.4	35.4	35.4
85°	18.6	20.5	22.4	24.2	26.1
87.5°	11.2	11.2	13.0	14.9	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)