

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: P562300

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562300  
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-80-96-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

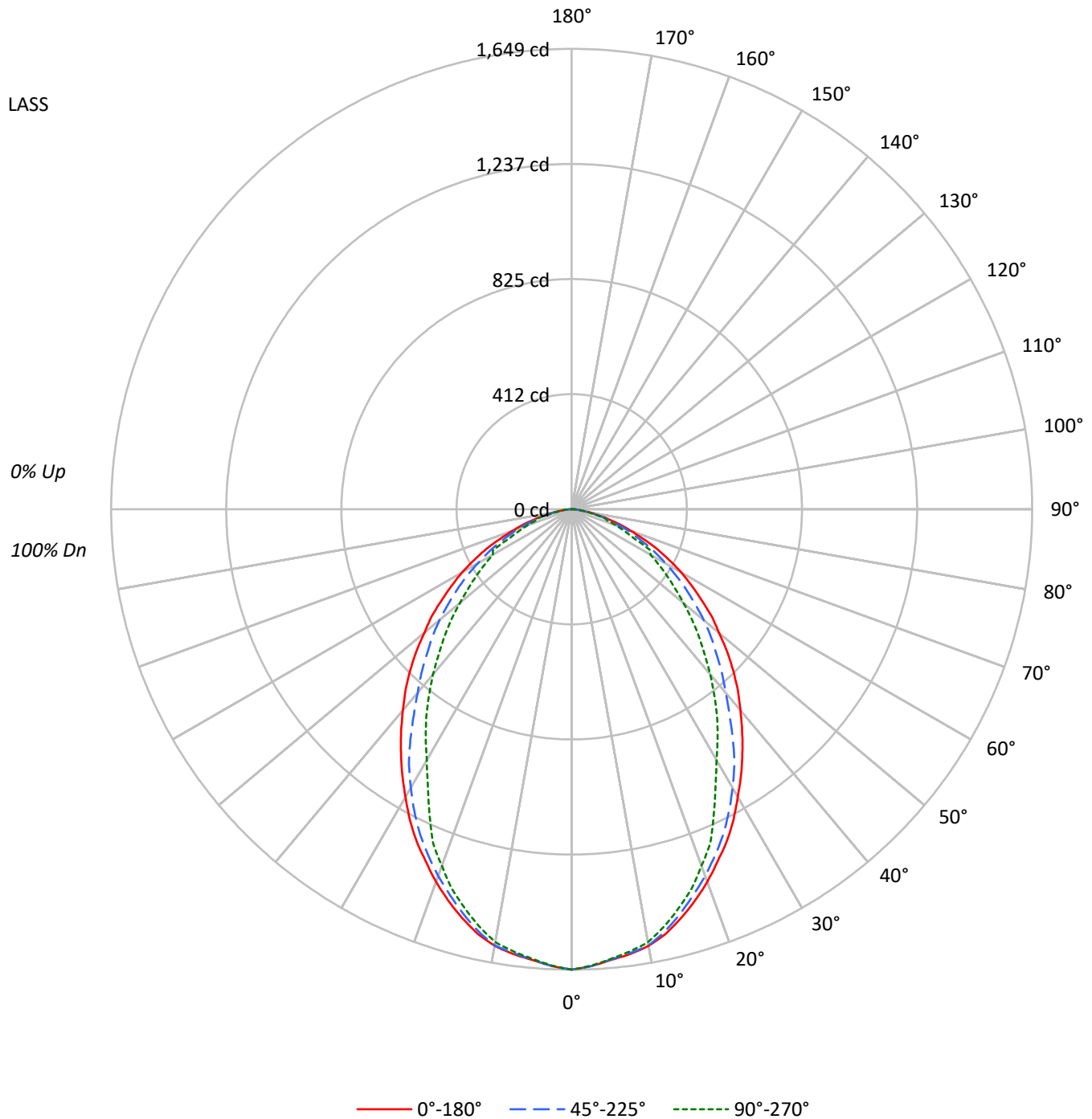
Lumens per Lamp: N/A  
Luminaire Lumens: 3237.0 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2219	2219	2219
5°	2188	2186	2183
10°	2169	2167	2151
15°	2111	2090	2060
20°	2033	2001	1946
25°	1950	1907	1788
30°	1848	1789	1611
35°	1750	1653	1490
40°	1651	1507	1356
45°	1556	1393	1226
50°	1440	1293	1093
55°	1333	1171	979
60°	1221	1047	877
65°	1074	916	777
70°	885	803	660
75°	703	614	644
80°	473	443	414
85°	295	354	412

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1556 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.5	4.7
10°-20°	421.2	13.0
20°-30°	583.2	18.0
30°-40°	621.8	19.2
40°-50°	567.3	17.5
50°-60°	444.4	13.7
60°-70°	289.7	8.9
70°-80°	128.3	4.0
80°-90°	27.5	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°	1157.9	35.8
0°-40°	1779.7	55.0
0°-60°	2791.5	86.2
0°-90°	3237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3237.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1620	1618	1618	1616	1616	154
15°	1515	1515	1500	1485	1479	426
25°	1313	1306	1285	1239	1205	603
35°	1066	1058	1006	930	907	666
45°	818	801	732	671	644	630
55°	568	551	499	440	418	510
65°	337	318	288	294	244	333
75°	135	126	118	112	124	145
85°	19	21	23	25	27	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1648.9	1648.9	1648.9	1648.9	1648.9
2.5°	1637.4	1637.4	1637.4	1635.5	1635.5
5°	1620.3	1618.4	1618.4	1616.5	1616.5
7.5°	1606.9	1605.0	1603.1	1601.2	1597.4
10°	1587.9	1587.9	1586.0	1576.4	1574.5
12.5°	1557.4	1555.5	1547.9	1534.5	1530.7
15°	1515.4	1515.4	1500.2	1484.9	1479.2
17.5°	1469.7	1467.8	1448.7	1433.5	1425.9
20°	1420.1	1416.3	1397.3	1372.5	1359.1
22.5°	1364.9	1364.9	1342.0	1309.6	1296.2
25°	1313.4	1305.8	1284.8	1239.0	1204.7
27.5°	1254.3	1242.9	1220.0	1155.2	1115.1
30°	1189.5	1183.8	1151.4	1067.5	1037.0
32.5°	1128.5	1119.0	1084.6	997.0	972.2
35°	1065.6	1058.0	1006.5	930.2	907.4
37.5°	1002.7	993.1	928.3	867.3	838.7
40°	939.8	928.3	857.8	802.5	772.0
42.5°	880.7	865.4	796.8	737.7	703.4
45°	817.8	800.6	732.0	671.0	644.3
47.5°	754.9	739.6	676.7	613.8	583.3
50°	688.1	674.8	617.6	554.7	522.3
52.5°	632.9	611.9	556.6	493.7	467.0
55°	568.1	550.9	499.4	440.3	417.5
57.5°	509.0	491.8	444.2	388.9	369.8
60°	453.7	428.9	388.9	341.2	326.0
62.5°	392.7	373.6	339.3	299.3	318.3
65°	337.4	318.3	287.8	293.6	244.0
67.5°	276.4	266.9	240.2	213.5	205.9
70°	224.9	213.5	204.0	175.4	167.7
72.5°	179.2	167.7	154.4	139.2	133.4
75°	135.3	125.8	118.2	112.5	123.9
77.5°	93.4	89.6	83.9	78.2	76.2
80°	61.0	59.1	57.2	55.3	53.4
82.5°	36.2	36.2	36.2	36.2	36.2
85°	19.1	21.0	22.9	24.8	26.7
87.5°	11.4	11.4	13.3	15.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)