

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: P562430

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562430  
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-50-UNV-80-97-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

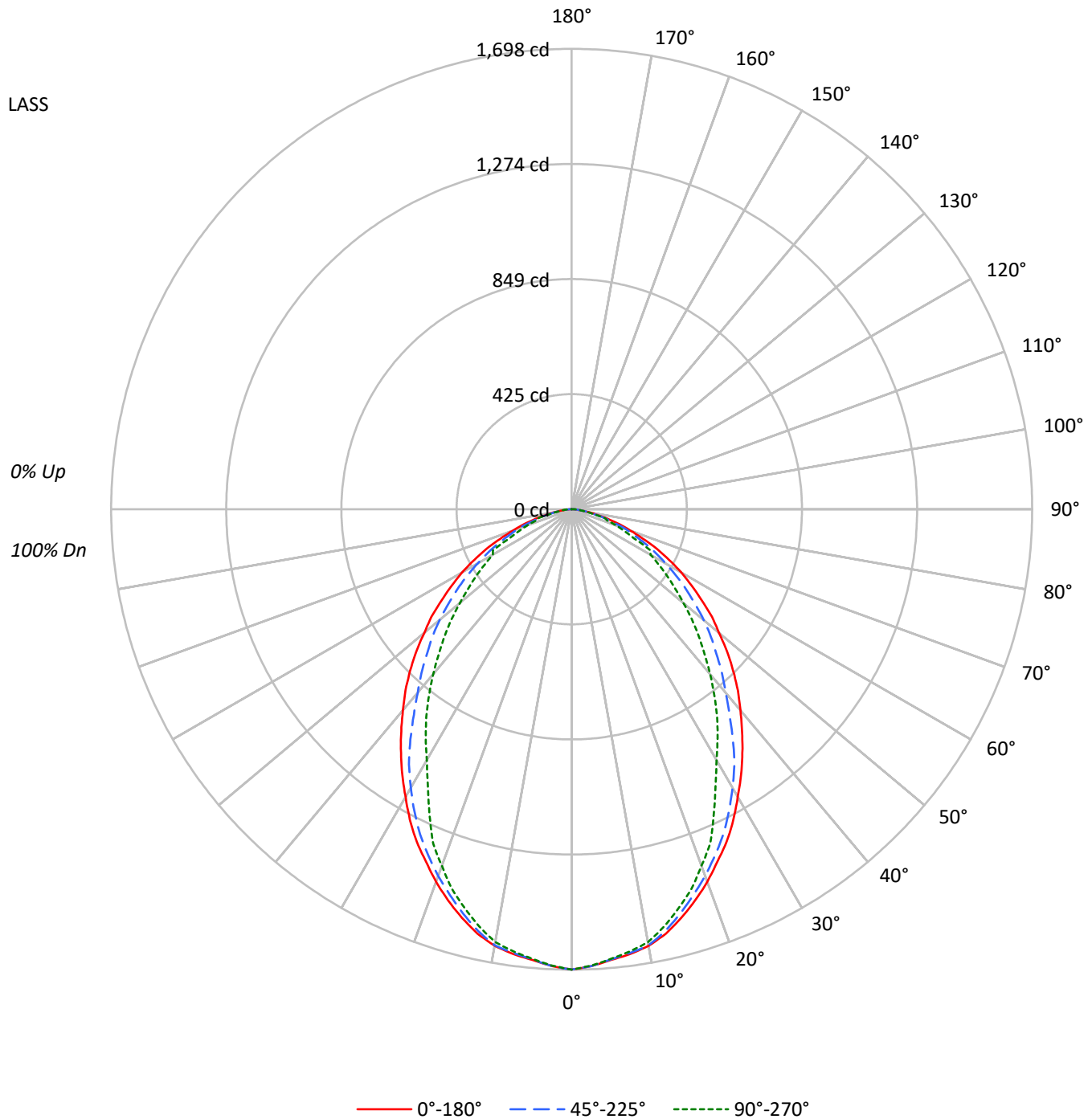
Lumens per Lamp: N/A  
Luminaire Lumens: 3333.0 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

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

	0°	45°	90°
0°	2284	2284	2284
5°	2253	2251	2248
10°	2234	2231	2215
15°	2174	2152	2122
20°	2094	2060	2004
25°	2008	1964	1842
30°	1903	1842	1659
35°	1802	1702	1535
40°	1700	1551	1396
45°	1602	1434	1262
50°	1483	1331	1126
55°	1372	1206	1008
60°	1257	1077	903
65°	1106	944	800
70°	911	826	679
75°	725	633	663
80°	487	456	426
85°	303	364	425

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1602 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.0	4.7
10°-20°	433.7	13.0
20°-30°	600.5	18.0
30°-40°	640.3	19.2
40°-50°	584.1	17.5
50°-60°	457.6	13.7
60°-70°	298.3	8.9
70°-80°	132.1	4.0
80°-90°	28.4	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°	1192.2	35.8
0°-40°	1832.5	55.0
0°-60°	2874.2	86.2
0°-90°	3333.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3333.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1698	1698	1698	1698	1698	
5°	1668	1666	1666	1664	1664	158
15°	1560	1560	1545	1529	1523	439
25°	1352	1344	1323	1276	1240	621
35°	1097	1089	1036	958	934	686
45°	842	824	754	691	663	649
55°	585	567	514	453	430	525
65°	347	328	296	302	251	342
75°	139	130	122	116	128	149
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1697.8	1697.8	1697.8	1697.8	1697.8
2.5°	1686.0	1686.0	1686.0	1684.0	1684.0
5°	1668.3	1666.4	1666.4	1664.4	1664.4
7.5°	1654.6	1652.6	1650.7	1648.7	1644.8
10°	1635.0	1635.0	1633.0	1623.2	1621.2
12.5°	1603.6	1601.6	1593.8	1580.0	1576.1
15°	1560.4	1560.4	1544.7	1529.0	1523.1
17.5°	1513.3	1511.3	1491.7	1476.0	1468.1
20°	1462.3	1458.3	1438.7	1413.2	1399.4
22.5°	1405.3	1405.3	1381.8	1348.4	1334.7
25°	1352.3	1344.5	1322.9	1275.8	1240.5
27.5°	1291.5	1279.7	1256.2	1189.4	1148.2
30°	1224.8	1218.9	1185.5	1099.1	1067.7
32.5°	1162.0	1152.1	1116.8	1026.5	1001.0
35°	1097.2	1089.3	1036.3	957.8	934.3
37.5°	1032.4	1022.6	955.9	893.1	863.6
40°	967.6	955.9	883.2	826.3	794.9
42.5°	906.8	891.1	820.4	759.6	724.3
45°	842.0	824.4	753.7	690.9	663.4
47.5°	777.3	761.6	696.8	632.0	600.6
50°	708.6	694.8	635.9	571.2	537.8
52.5°	651.6	630.0	573.1	508.4	480.9
55°	584.9	567.2	514.2	453.4	429.8
57.5°	524.1	506.4	457.3	400.4	380.8
60°	467.1	441.6	400.4	351.3	335.6
62.5°	404.3	384.7	349.4	308.2	327.8
65°	347.4	327.8	296.4	302.3	251.2
67.5°	284.6	274.8	247.3	219.8	212.0
70°	231.6	219.8	210.0	180.6	172.7
72.5°	184.5	172.7	159.0	143.3	137.4
75°	139.4	129.5	121.7	115.8	127.6
77.5°	96.2	92.2	86.4	80.5	78.5
80°	62.8	60.8	58.9	56.9	55.0
82.5°	37.3	37.3	37.3	37.3	37.3
85°	19.6	21.6	23.6	25.5	27.5
87.5°	11.8	11.8	13.7	15.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)