

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: P562925

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562925  
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-LD4-2STD-35-UNV-93-96-EDD  
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

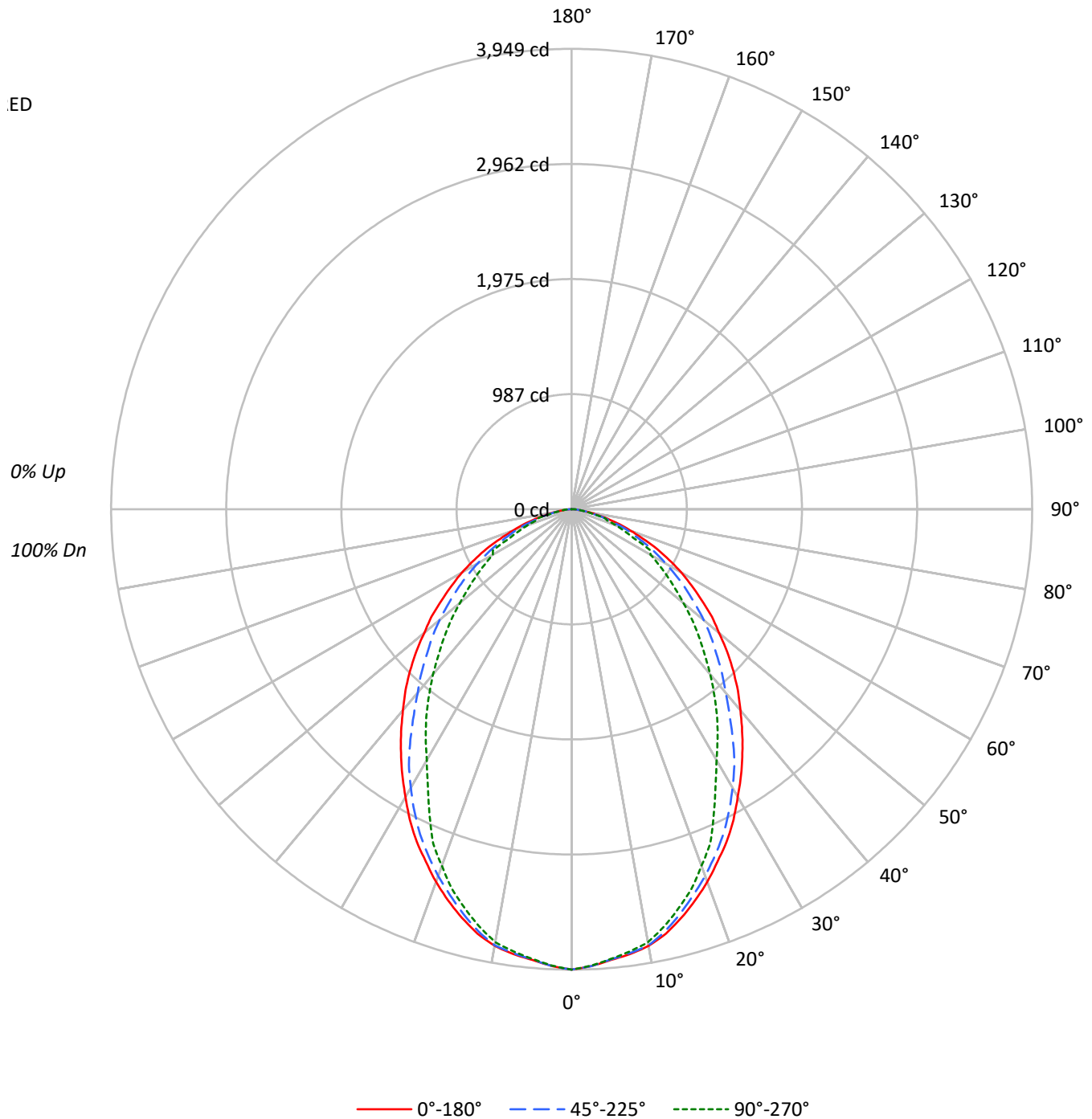
Lumens per Lamp: N/A  
Luminaire Lumens: 7752.0 lumens  
Efficiency: N/A  
Efficacy: 116.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5313	5313	5313
5°	5241	5235	5229
10°	5195	5189	5152
15°	5055	5004	4935
20°	4870	4791	4660
25°	4669	4568	4283
30°	4426	4284	3858
35°	4192	3959	3569
40°	3953	3608	3247
45°	3726	3336	2936
50°	3450	3096	2618
55°	3191	2806	2345
60°	2924	2506	2101
65°	2572	2195	1860
70°	2119	1922	1580
75°	1685	1471	1542
80°	1132	1062	990
85°	706	846	986

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3726 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	367.6	4.7
10°-20°	1008.8	13.0
20°-30°	1396.6	18.0
30°-40°	1489.2	19.2
40°-50°	1358.6	17.5
50°-60°	1064.3	13.7
60°-70°	693.7	8.9
70°-80°	307.3	4.0
80°-90°	66.0	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°	2773.0	35.8
0°-40°	4262.1	55.0
0°-60°	6685.0	86.2
0°-90°	7752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7752.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3949	3949	3949	3949	3949	
5°	3880	3876	3876	3871	3871	368
15°	3629	3629	3593	3556	3542	1020
25°	3145	3127	3077	2967	2885	1444
35°	2552	2534	2410	2228	2173	1595
45°	1958	1917	1753	1607	1543	1509
55°	1360	1319	1196	1054	1000	1220
65°	808	762	689	703	584	796
75°	324	301	283	269	297	347
85°	46	50	55	59	64	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3948.8	3948.8	3948.8	3948.8	3948.8
2.5°	3921.4	3921.4	3921.4	3916.8	3916.8
5°	3880.3	3875.7	3875.7	3871.2	3871.2
7.5°	3848.3	3843.8	3839.2	3834.6	3825.5
10°	3802.7	3802.7	3798.1	3775.3	3770.7
12.5°	3729.6	3725.1	3706.8	3674.9	3665.7
15°	3629.2	3629.2	3592.7	3556.2	3542.5
17.5°	3519.7	3515.1	3469.4	3432.9	3414.7
20°	3401.0	3391.8	3346.2	3286.8	3254.9
22.5°	3268.6	3268.6	3213.8	3136.2	3104.2
25°	3145.3	3127.1	3076.8	2967.3	2885.1
27.5°	3003.8	2976.4	2921.6	2766.4	2670.6
30°	2848.6	2834.9	2757.3	2556.4	2483.4
32.5°	2702.5	2679.7	2597.5	2387.5	2328.2
35°	2551.9	2533.6	2410.3	2227.7	2173.0
37.5°	2401.2	2378.4	2223.2	2077.1	2008.6
40°	2250.6	2223.2	2054.3	1921.9	1848.8
42.5°	2109.1	2072.5	1908.2	1766.7	1684.5
45°	1958.4	1917.3	1753.0	1606.9	1543.0
47.5°	1807.8	1771.2	1620.6	1469.9	1396.9
50°	1648.0	1616.0	1479.1	1328.4	1250.8
52.5°	1515.6	1465.4	1333.0	1182.3	1118.4
55°	1360.4	1319.3	1196.0	1054.5	999.7
57.5°	1218.9	1177.8	1063.7	931.3	885.6
60°	1086.5	1027.1	931.3	817.1	780.6
62.5°	940.4	894.7	812.6	716.7	762.4
65°	808.0	762.4	689.3	703.0	584.3
67.5°	661.9	639.1	575.2	511.3	493.0
70°	538.7	511.3	488.5	420.0	401.7
72.5°	429.1	401.7	369.8	333.2	319.6
75°	324.1	301.3	283.0	269.3	296.7
77.5°	223.7	214.6	200.9	187.2	182.6
80°	146.1	141.5	137.0	132.4	127.8
82.5°	86.7	86.7	86.7	86.7	86.7
85°	45.7	50.2	54.8	59.3	63.9
87.5°	27.4	27.4	32.0	36.5	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)