

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: P563967

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563967  
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-LD4-4LO-50-UNV-80-97-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

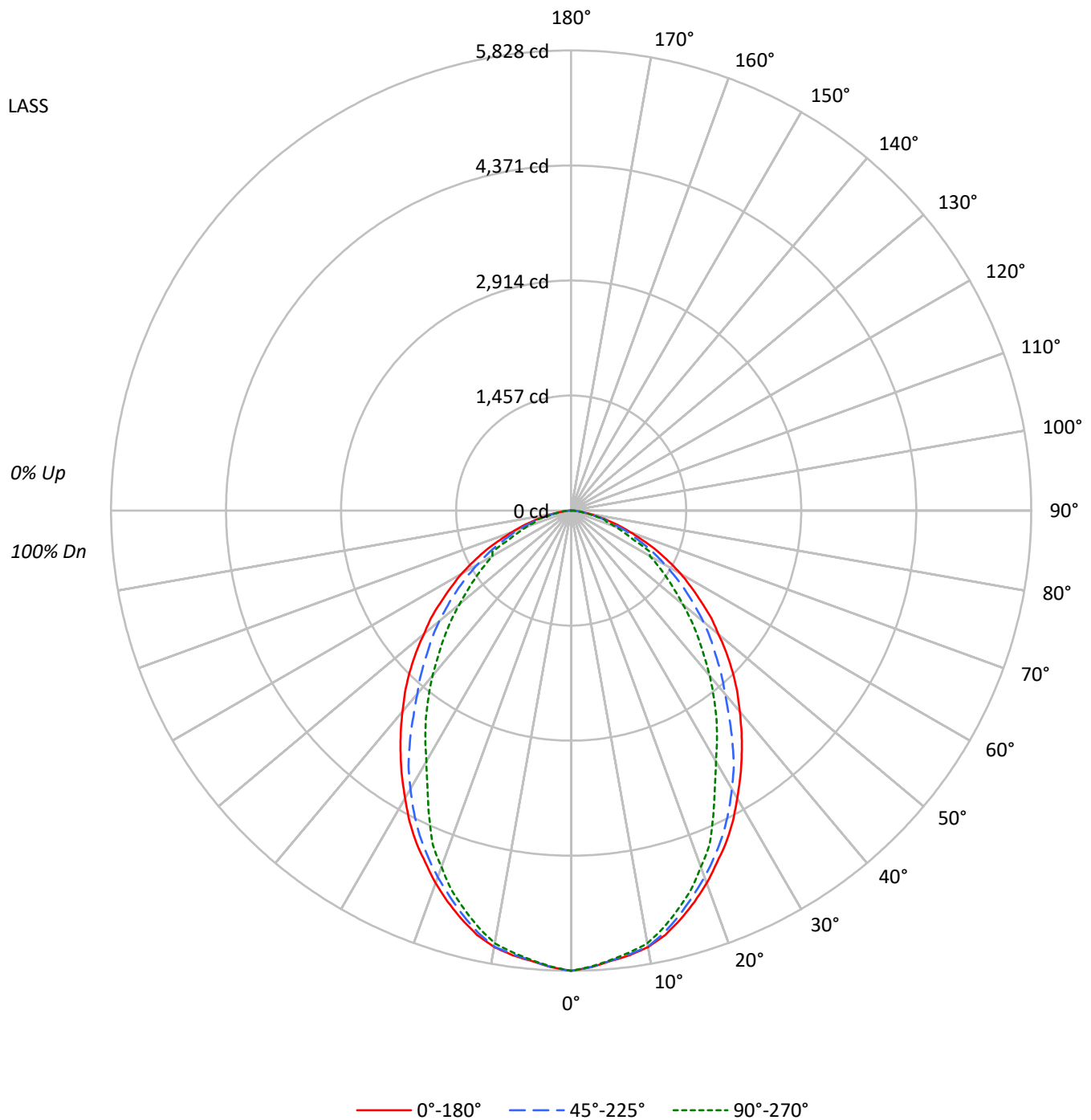
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11442.0 lumens  
Efficiency: N/A  
Efficacy: 122.2 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): 93.6  
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°	7842	7842	7842
5°	7735	7726	7717
10°	7668	7659	7604
15°	7462	7387	7283
20°	7188	7072	6879
25°	6892	6742	6322
30°	6532	6323	5695
35°	6187	5844	5268
40°	5835	5326	4793
45°	5500	4923	4334
50°	5092	4570	3864
55°	4710	4141	3461
60°	4316	3699	3101
65°	3797	3239	2746
70°	3128	2836	2332
75°	2487	2172	2277
80°	1671	1566	1462
85°	1041	1249	1456

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5500 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	542.5	4.7
10°-20°	1489.0	13.0
20°-30°	2061.4	18.0
30°-40°	2198.0	19.2
40°-50°	2005.2	17.5
50°-60°	1571.0	13.7
60°-70°	1023.9	8.9
70°-80°	453.6	4.0
80°-90°	97.4	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°	4092.9	35.8
0°-40°	6290.9	55.0
0°-60°	9867.1	86.2
0°-90°	11442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5828	5828	5828	5828	5828	
5°	5727	5721	5721	5714	5714	544
15°	5357	5357	5303	5249	5229	1506
25°	4642	4616	4541	4380	4258	2131
35°	3767	3740	3558	3288	3207	2355
45°	2891	2830	2587	2372	2278	2227
55°	2008	1947	1765	1556	1476	1801
65°	1193	1125	1017	1038	862	1175
75°	478	445	418	398	438	513
85°	67	74	81	88	94	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5828.4	5828.4	5828.4	5828.4	5828.4
2.5°	5788.0	5788.0	5788.0	5781.2	5781.2
5°	5727.3	5720.6	5720.6	5713.9	5713.9
7.5°	5680.2	5673.4	5666.7	5660.0	5646.5
10°	5612.8	5612.8	5606.0	5572.4	5565.6
12.5°	5505.0	5498.2	5471.3	5424.1	5410.6
15°	5356.7	5356.7	5302.8	5248.9	5228.7
17.5°	5195.0	5188.3	5120.9	5067.0	5040.1
20°	5019.8	5006.4	4939.0	4851.4	4804.2
22.5°	4824.4	4824.4	4743.6	4629.0	4581.9
25°	4642.5	4615.6	4541.4	4379.7	4258.4
27.5°	4433.6	4393.2	4312.3	4083.3	3941.8
30°	4204.5	4184.3	4069.8	3773.3	3665.5
32.5°	3988.9	3955.2	3833.9	3524.0	3436.4
35°	3766.6	3739.6	3557.7	3288.2	3207.3
37.5°	3544.2	3510.5	3281.4	3065.8	2964.7
40°	3321.9	3281.4	3032.1	2836.7	2728.9
42.5°	3113.0	3059.1	2816.5	2607.6	2486.3
45°	2890.6	2830.0	2587.4	2371.8	2277.5
47.5°	2668.3	2614.4	2392.0	2169.6	2061.8
50°	2432.4	2385.3	2183.1	1960.8	1846.2
52.5°	2237.0	2162.9	1967.5	1745.2	1650.8
55°	2007.9	1947.3	1765.4	1556.5	1475.6
57.5°	1799.1	1738.4	1570.0	1374.6	1307.2
60°	1603.7	1516.1	1374.6	1206.1	1152.2
62.5°	1388.0	1320.7	1199.4	1057.9	1125.3
65°	1192.6	1125.3	1017.4	1037.7	862.5
67.5°	977.0	943.3	849.0	754.7	727.7
70°	795.1	754.7	721.0	619.9	592.9
72.5°	633.4	592.9	545.8	491.9	471.7
75°	478.4	444.7	417.8	397.5	438.0
77.5°	330.2	316.7	296.5	276.3	269.5
80°	215.6	208.9	202.1	195.4	188.7
82.5°	128.0	128.0	128.0	128.0	128.0
85°	67.4	74.1	80.9	87.6	94.3
87.5°	40.4	40.4	47.2	53.9	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)