

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: P563064

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563064  
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-LD4-3HI-35-UNV-80-88-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

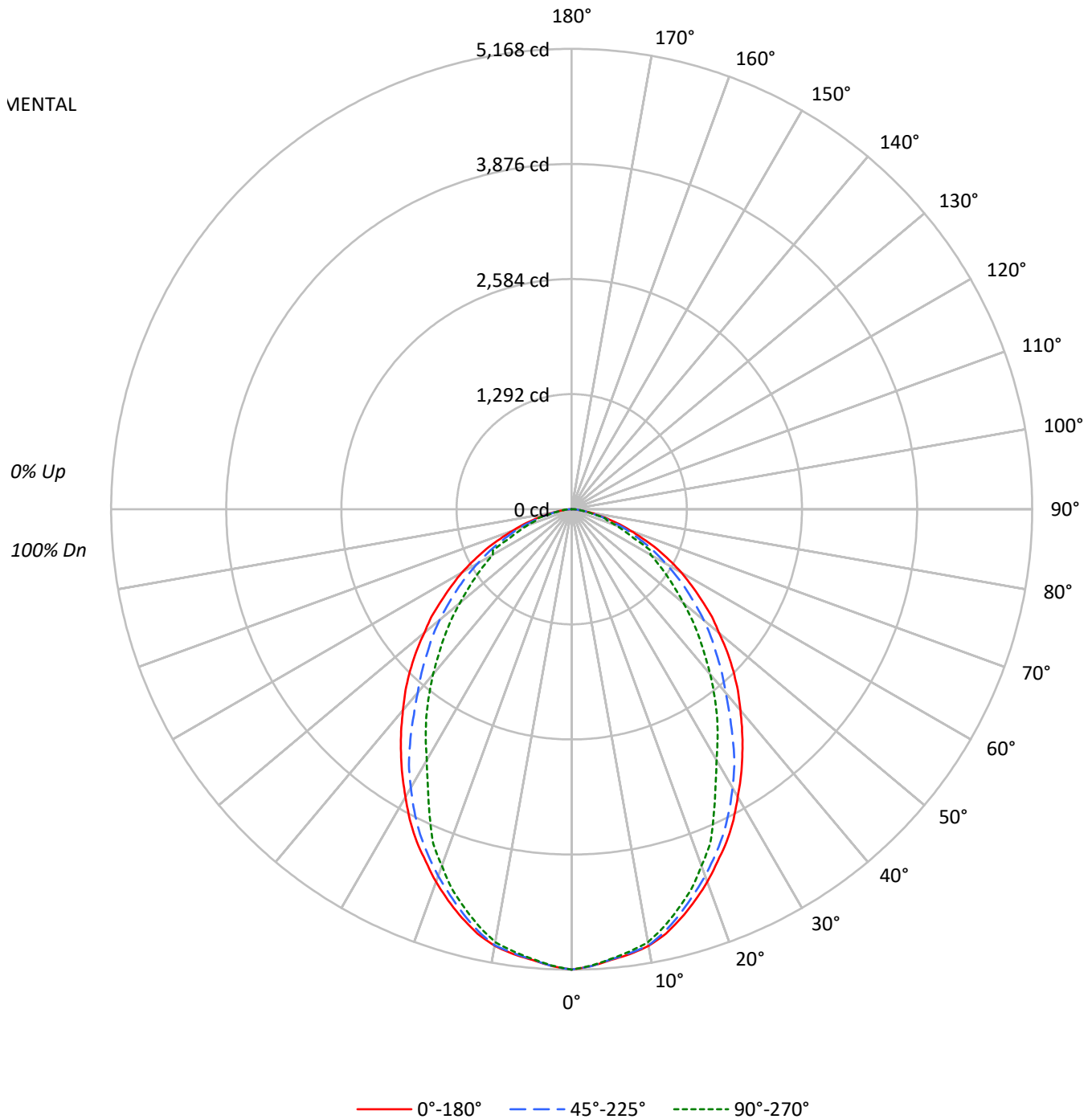
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10145.0 lumens  
Efficiency: N/A  
Efficacy: 78.3 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): 129.6  
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					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°	6953	6953	6953
5°	6859	6851	6843
10°	6799	6791	6742
15°	6616	6549	6458
20°	6373	6270	6099
25°	6111	5978	5605
30°	5792	5606	5049
35°	5485	5181	4671
40°	5173	4722	4250
45°	4877	4365	3842
50°	4514	4052	3426
55°	4176	3672	3069
60°	3826	3279	2749
65°	3366	2872	2435
70°	2773	2515	2068
75°	2205	1926	2019
80°	1481	1389	1296
85°	922	1107	1291

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4877 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	481.0	4.7
10°-20°	1320.2	13.0
20°-30°	1827.7	18.0
30°-40°	1948.9	19.2
40°-50°	1777.9	17.5
50°-60°	1392.9	13.7
60°-70°	907.8	8.9
70°-80°	402.2	4.0
80°-90°	86.3	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°	3628.9	35.8
0°-40°	5577.8	55.0
0°-60°	8748.6	86.2
0°-90°	10145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10145.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5168	5168	5168	5168	5168	
5°	5078	5072	5072	5066	5066	482
15°	4750	4750	4702	4654	4636	1335
25°	4116	4092	4027	3883	3776	1890
35°	3340	3316	3154	2915	2844	2088
45°	2563	2509	2294	2103	2019	1974
55°	1780	1727	1565	1380	1308	1597
65°	1057	998	902	920	765	1042
75°	424	394	370	352	388	455
85°	60	66	72	78	84	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5167.7	5167.7	5167.7	5167.7	5167.7
2.5°	5131.9	5131.9	5131.9	5125.9	5125.9
5°	5078.1	5072.1	5072.1	5066.2	5066.2
7.5°	5036.3	5030.3	5024.3	5018.4	5006.4
10°	4976.6	4976.6	4970.6	4940.7	4934.7
12.5°	4881.0	4875.0	4851.1	4809.3	4797.3
15°	4749.5	4749.5	4701.7	4653.9	4636.0
17.5°	4606.1	4600.2	4540.4	4492.6	4468.7
20°	4450.8	4438.9	4379.1	4301.5	4259.6
22.5°	4277.6	4277.6	4205.9	4104.3	4062.5
25°	4116.3	4092.4	4026.6	3883.3	3775.7
27.5°	3931.1	3895.2	3823.5	3620.4	3494.9
30°	3727.9	3710.0	3608.4	3345.6	3250.0
32.5°	3536.8	3506.9	3399.3	3124.5	3046.9
35°	3339.6	3315.7	3154.4	2915.4	2843.7
37.5°	3142.5	3112.6	2909.5	2718.3	2628.7
40°	2945.3	2909.5	2688.4	2515.2	2419.6
42.5°	2760.1	2712.3	2497.2	2312.0	2204.5
45°	2563.0	2509.2	2294.1	2102.9	2019.3
47.5°	2365.8	2318.0	2120.9	1923.7	1828.1
50°	2156.7	2114.9	1935.7	1738.5	1636.9
52.5°	1983.5	1917.7	1744.5	1547.3	1463.7
55°	1780.3	1726.6	1565.3	1380.1	1308.4
57.5°	1595.1	1541.4	1392.0	1218.7	1159.0
60°	1421.9	1344.2	1218.7	1069.4	1021.6
62.5°	1230.7	1171.0	1063.4	938.0	997.7
65°	1057.4	997.7	902.1	920.0	764.7
67.5°	866.3	836.4	752.8	669.1	645.2
70°	705.0	669.1	639.2	549.6	525.7
72.5°	561.6	525.7	483.9	436.1	418.2
75°	424.2	394.3	370.4	352.5	388.3
77.5°	292.7	280.8	262.9	244.9	239.0
80°	191.2	185.2	179.2	173.3	167.3
82.5°	113.5	113.5	113.5	113.5	113.5
85°	59.7	65.7	71.7	77.7	83.6
87.5°	35.8	35.8	41.8	47.8	53.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)