

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: P562550

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562550  
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-LD4-2HI-40-UNV-80-87-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

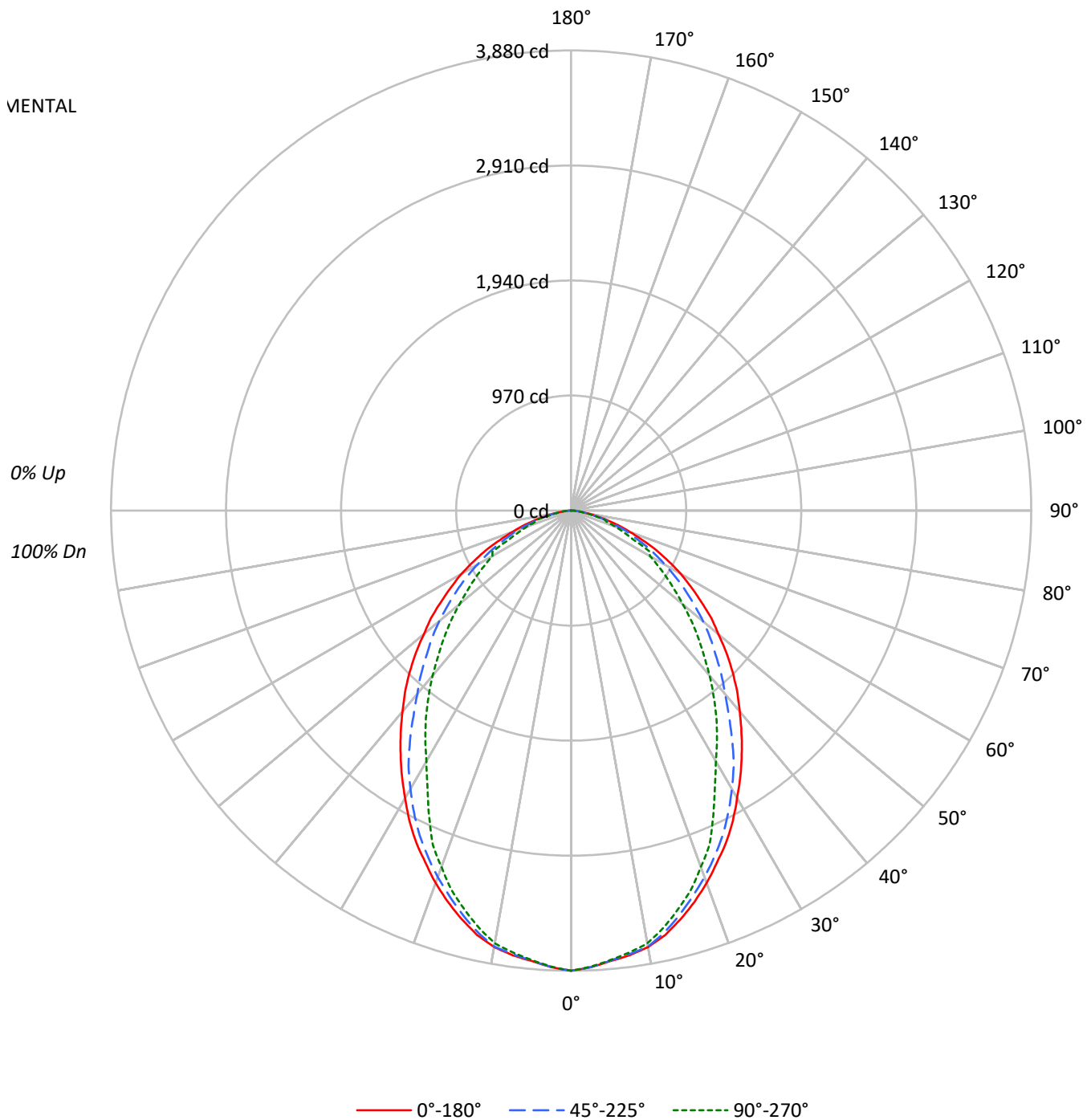
Lumens per Lamp: N/A  
Luminaire Lumens: 7617.0 lumens  
Efficiency: N/A  
Efficacy: 88.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 86.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5220	5220	5220
5°	5150	5143	5137
10°	5105	5099	5062
15°	4967	4917	4849
20°	4785	4708	4579
25°	4588	4488	4209
30°	4349	4209	3791
35°	4119	3890	3507
40°	3884	3545	3191
45°	3662	3277	2885
50°	3390	3042	2573
55°	3136	2757	2304
60°	2873	2463	2064
65°	2528	2156	1828
70°	2082	1888	1553
75°	1656	1446	1516
80°	1112	1043	973
85°	693	831	969

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3662 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	361.2	4.7
10°-20°	991.2	13.0
20°-30°	1372.3	18.0
30°-40°	1463.2	19.2
40°-50°	1334.9	17.5
50°-60°	1045.8	13.7
60°-70°	681.6	8.9
70°-80°	302.0	4.0
80°-90°	64.8	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°	2724.7	35.8
0°-40°	4187.9	55.0
0°-60°	6568.6	86.2
0°-90°	7617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7617.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3880	3880	3880	3880	3880	
5°	3813	3808	3808	3804	3804	362
15°	3566	3566	3530	3494	3481	1003
25°	3090	3073	3023	2916	2835	1419
35°	2507	2490	2368	2189	2135	1568
45°	1924	1884	1722	1579	1516	1482
55°	1337	1296	1175	1036	982	1199
65°	794	749	677	691	574	782
75°	318	296	278	265	292	341
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3880.0	3880.0	3880.0	3880.0	3880.0
2.5°	3853.1	3853.1	3853.1	3848.6	3848.6
5°	3812.7	3808.2	3808.2	3803.7	3803.7
7.5°	3781.3	3776.8	3772.3	3767.9	3758.9
10°	3736.5	3736.5	3732.0	3709.5	3705.1
12.5°	3664.7	3660.2	3642.3	3610.9	3601.9
15°	3566.0	3566.0	3530.1	3494.2	3480.8
17.5°	3458.4	3453.9	3409.0	3373.1	3355.2
20°	3341.7	3332.8	3287.9	3229.6	3198.2
22.5°	3211.7	3211.7	3157.8	3081.6	3050.2
25°	3090.5	3072.6	3023.3	2915.6	2834.9
27.5°	2951.5	2924.6	2870.7	2718.2	2624.0
30°	2799.0	2785.5	2709.3	2511.9	2440.1
32.5°	2655.4	2633.0	2552.3	2345.9	2287.6
35°	2507.4	2489.5	2368.4	2188.9	2135.1
37.5°	2359.4	2337.0	2184.5	2040.9	1973.6
40°	2211.4	2184.5	2018.5	1888.4	1816.6
42.5°	2072.3	2036.4	1875.0	1735.9	1655.2
45°	1924.3	1883.9	1722.4	1578.9	1516.1
47.5°	1776.3	1740.4	1592.4	1444.3	1372.6
50°	1619.3	1587.9	1453.3	1305.3	1229.0
52.5°	1489.2	1439.9	1309.8	1161.8	1099.0
55°	1336.7	1296.3	1175.2	1036.2	982.3
57.5°	1197.6	1157.3	1045.1	915.1	870.2
60°	1067.6	1009.2	915.1	802.9	767.0
62.5°	924.0	879.2	798.4	704.2	749.1
65°	793.9	749.1	677.3	690.8	574.1
67.5°	650.4	628.0	565.2	502.4	484.4
70°	529.3	502.4	480.0	412.7	394.7
72.5°	421.6	394.7	363.3	327.4	314.0
75°	318.5	296.0	278.1	264.6	291.6
77.5°	219.8	210.8	197.4	183.9	179.4
80°	143.5	139.1	134.6	130.1	125.6
82.5°	85.2	85.2	85.2	85.2	85.2
85°	44.9	49.3	53.8	58.3	62.8
87.5°	26.9	26.9	31.4	35.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)