

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055642

Luminaire Tested: S123R3DR-S560D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055642  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S560D927-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

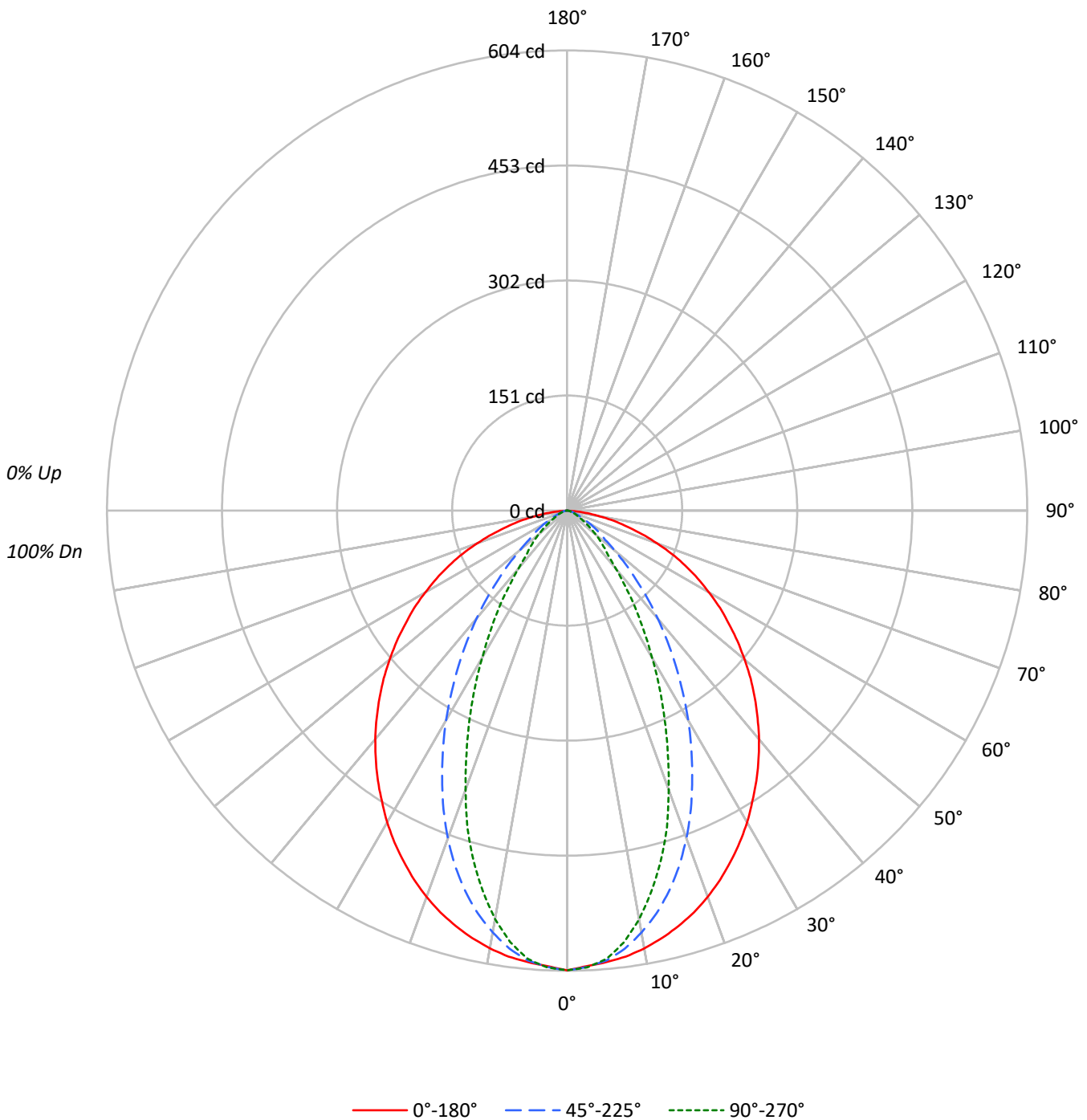
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 839.3 lumens  
Efficiency: N/A  
Efficacy: 43.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

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

	0°	45°	90°
0°	7276	7276	7276
5°	7200	7173	7151
10°	7143	6884	6667
15°	7047	6454	5934
20°	6922	5872	4999
25°	6758	5167	4033
30°	6578	4428	3106
35°	6374	3655	2299
40°	6168	2908	1566
45°	5940	2176	1180
50°	5698	1514	923
55°	5446	1106	673
60°	5187	827	482
65°	4878	556	377
70°	4417	402	303
75°	3810	293	238
80°	3055	236	201
85°	1577	235	152

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5940 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.8	6.6
10°-20°	145.2	17.3
20°-30°	182.5	21.7
30°-40°	169.9	20.2
40°-50°	130.1	15.5
50°-60°	86.5	10.3
60°-70°	46.6	5.6
70°-80°	19.1	2.3
80°-90°	3.7	0.4
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°	383.5	45.7
0°-40°	553.4	65.9
0°-60°	770.0	91.7
0°-90°	839.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	839.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	604	604	604	604	604	
5°	595	601	593	590	591	56
15°	565	556	517	487	475	159
25°	508	474	388	324	303	234
35°	433	369	248	176	156	271
45°	348	257	128	75	69	269
55°	259	150	53	37	32	232
65°	171	58	20	14	13	169
75°	82	14	6	6	5	88
85°	11	2	2	2	1	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	603.5	603.5	603.5	603.5	603.5
2.5°	598.4	605.8	599.5	600.1	600.1
5°	594.9	601.2	592.7	590.4	590.9
7.5°	590.4	594.4	580.1	572.6	571.5
10°	583.5	584.7	562.3	549.2	544.6
12.5°	574.9	570.9	541.7	520.0	511.4
15°	564.6	555.5	517.1	486.8	475.4
17.5°	553.2	537.7	489.1	449.6	435.9
20°	539.5	517.7	457.7	408.5	389.6
22.5°	524.6	496.6	424.5	366.1	345.0
25°	508.0	473.7	388.4	323.8	303.2
27.5°	490.8	449.1	353.0	283.7	262.6
30°	472.5	423.9	318.1	244.8	223.1
32.5°	452.5	396.4	282.0	208.8	187.1
35°	433.1	369.0	248.3	175.6	156.2
37.5°	412.5	341.5	215.7	146.4	124.7
40°	391.9	313.5	184.8	117.8	99.5
42.5°	370.1	285.5	155.6	93.8	79.5
45°	348.4	257.4	127.6	74.9	69.2
47.5°	326.7	229.4	103.0	64.6	58.9
50°	303.8	202.5	80.7	54.9	49.2
52.5°	282.0	175.6	62.9	45.2	40.0
55°	259.1	149.9	52.6	36.6	32.0
57.5°	238.0	123.6	43.5	28.6	25.2
60°	215.1	100.1	34.3	22.3	20.0
62.5°	193.4	78.4	26.3	17.7	16.0
65°	171.0	57.8	19.5	14.3	13.2
67.5°	148.7	41.8	14.9	11.4	10.9
70°	125.3	31.5	11.4	9.2	8.6
72.5°	103.0	22.3	8.6	7.4	6.9
75°	81.8	13.7	6.3	5.7	5.1
77.5°	62.9	8.0	4.6	4.6	4.0
80°	44.0	4.6	3.4	3.4	2.9
82.5°	26.9	2.9	2.3	2.3	2.3
85°	11.4	1.7	1.7	1.7	1.1
87.5°	1.7	0.6	0.6	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0

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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.71	18.07	17.07	18.38	18.69	5.28	6.64	5.65	6.95	7.27
	3H	18.46	19.67	18.84	20.00	20.36	5.95	7.15	6.33	7.48	7.85
	4H	19.16	20.29	19.56	20.64	21.02	6.14	7.27	6.54	7.62	8.00
	6H	19.67	20.71	20.09	21.08	21.47	6.26	7.30	6.68	7.67	8.06
	8H	19.81	20.79	20.24	21.18	21.59	6.30	7.28	6.73	7.67	8.07
	12H	19.87	20.80	20.30	21.18	21.61	6.31	7.24	6.74	7.63	8.06
4H	2H	16.52	17.64	16.92	17.99	18.37	5.84	6.97	6.24	7.32	7.70
	3H	18.31	19.23	18.72	19.63	20.04	6.64	7.56	7.05	7.96	8.37
	4H	19.00	19.83	19.44	20.25	20.69	6.90	7.72	7.33	8.14	8.58
	6H	19.57	20.28	20.04	20.73	21.20	7.09	7.81	7.56	8.25	8.72
	8H	19.75	20.41	20.22	20.86	21.33	7.15	7.81	7.62	8.26	8.73
	12H	19.84	20.42	20.32	20.90	21.38	7.18	7.77	7.67	8.25	8.72
8H	4H	18.88	19.54	19.35	19.99	20.46	7.21	7.87	7.68	8.32	8.79
	6H	19.43	19.98	19.94	20.47	20.95	7.46	8.00	7.96	8.49	8.98
	8H	19.61	20.10	20.13	20.61	21.10	7.55	8.03	8.07	8.55	9.04
	12H	19.72	20.14	20.23	20.64	21.21	7.62	8.05	8.14	8.55	9.12
12H	4H	18.84	19.42	19.32	19.91	20.38	7.25	7.84	7.74	8.32	8.80
	6H	19.38	19.86	19.90	20.38	20.87	7.50	7.99	8.02	8.50	9.00
	8H	19.57	20.00	20.09	20.49	21.06	7.63	8.06	8.15	8.55	9.12