

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



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: NEO-RAY

Report Number: P1055297

Luminaire Tested: S122R3DR-H1005D935-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055297  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H1005D935-X4F0-XX-UDD-FLL-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

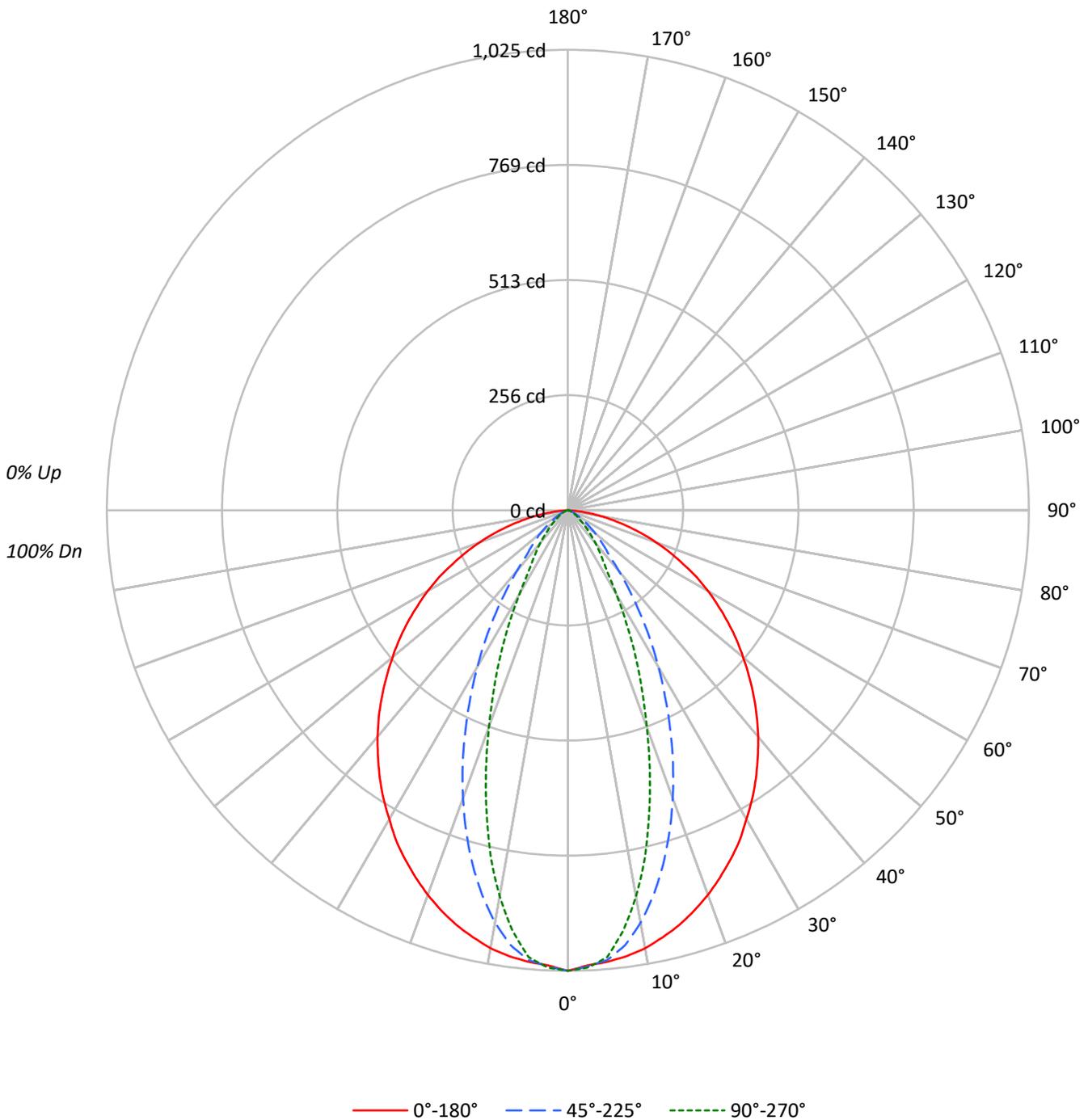
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1174.7 lumens  
Efficiency: N/A  
Efficacy: 32.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
Input Voltage (V): 120  
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

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

	0°	45°	90°
0°	19419	19419	19419
5°	19182	19111	18992
10°	19042	17930	16795
15°	18749	16039	13699
20°	18361	13752	10333
25°	17909	11265	7379
30°	17368	8794	4699
35°	16849	6451	3139
40°	16279	4350	2362
45°	15650	3062	1683
50°	14994	2331	1185
55°	14355	1619	872
60°	13660	1095	712
65°	12669	789	565
70°	11550	626	487
75°	10021	549	366
80°	7954	415	415
85°	4369	543	283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15650 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	8.0
10°-20°	230.0	19.6
20°-30°	262.8	22.4
30°-40°	222.8	19.0
40°-50°	166.3	14.2
50°-60°	107.4	9.1
60°-70°	59.9	5.1
70°-80°	26.3	2.2
80°-90°	5.5	0.5
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°	586.5	49.9
0°-40°	809.3	68.9
0°-60°	1083.0	92.2
0°-90°	1174.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1174.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1025	1025	1025	1025	1025	
5°	1009	1021	1005	995	999	96
15°	956	932	818	731	698	269
25°	857	756	539	394	353	394
35°	728	549	279	152	136	455
45°	584	347	114	74	63	451
55°	435	164	49	30	26	389
65°	283	60	18	14	13	281
75°	137	13	8	6	5	146
85°	20	1	2	1	1	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1025.0	1025.0	1025.0	1025.0	1025.0
2.5°	1013.7	1028.7	1016.2	1016.2	1018.7
5°	1008.6	1021.2	1004.9	994.8	998.6
7.5°	1001.1	1009.9	976.0	945.8	943.3
10°	989.8	993.6	932.0	885.5	873.0
12.5°	973.5	964.7	878.0	812.7	791.3
15°	955.9	932.0	817.7	731.0	698.4
17.5°	934.5	891.8	751.1	645.6	605.4
20°	910.7	850.4	682.1	556.4	512.5
22.5°	884.3	803.9	610.5	472.3	428.3
25°	856.7	756.2	538.9	394.4	353.0
27.5°	827.8	705.9	468.5	324.1	278.9
30°	793.9	654.4	402.0	256.2	214.8
32.5°	762.4	600.4	340.4	198.5	163.3
35°	728.5	548.9	278.9	152.0	135.7
37.5°	693.4	497.4	224.8	128.1	114.3
40°	658.2	445.9	175.9	108.0	95.5
42.5°	621.8	395.7	135.7	90.4	77.9
45°	584.1	346.7	114.3	74.1	62.8
47.5°	546.4	297.7	95.5	59.0	50.2
50°	508.7	251.2	79.1	46.5	40.2
52.5°	472.3	207.3	62.8	37.7	32.7
55°	434.6	164.5	49.0	30.1	26.4
57.5°	396.9	128.1	37.7	25.1	22.6
60°	360.5	96.7	28.9	20.1	18.8
62.5°	322.8	77.9	22.6	16.3	15.1
65°	282.6	60.3	17.6	13.8	12.6
67.5°	246.2	44.0	13.8	11.3	10.0
70°	208.5	30.1	11.3	10.0	8.8
72.5°	172.1	18.8	8.8	7.5	7.5
75°	136.9	12.6	7.5	6.3	5.0
77.5°	104.3	7.5	5.0	5.0	3.8
80°	72.9	5.0	3.8	3.8	3.8
82.5°	45.2	3.8	2.5	2.5	2.5
85°	20.1	1.3	2.5	1.3	1.3
87.5°	3.8	1.3	1.3	1.3	1.3
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	18.56	19.88	18.92	20.19	20.50	4.86	6.18	5.23	6.49	6.81
	3H	21.03	22.20	21.41	22.53	22.89	5.71	6.88	6.09	7.21	7.58
	4H	21.98	23.07	22.39	23.43	23.81	5.98	7.07	6.39	7.43	7.81
	6H	22.67	23.67	23.09	24.04	24.44	6.18	7.18	6.59	7.55	7.95
	8H	22.87	23.82	23.30	24.21	24.61	6.25	7.20	6.68	7.59	8.00
	12H	22.95	23.86	23.38	24.24	24.67	6.28	7.19	6.71	7.57	8.00
4H	2H	18.34	19.43	18.74	19.78	20.17	5.44	6.53	5.84	6.88	7.26
	3H	20.83	21.72	21.24	22.12	22.53	6.46	7.36	6.88	7.76	8.17
	4H	21.77	22.57	22.20	22.99	23.43	6.83	7.63	7.27	8.05	8.49
	6H	22.53	23.22	22.99	23.66	24.13	7.13	7.82	7.59	8.26	8.73
	8H	22.77	23.41	23.24	23.86	24.33	7.23	7.87	7.70	8.32	8.79
	12H	22.90	23.47	23.38	23.95	24.42	7.27	7.84	7.76	8.33	8.80
8H	4H	21.64	22.28	22.11	22.73	23.20	7.20	7.85	7.67	8.29	8.76
	6H	22.38	22.90	22.88	23.40	23.88	7.57	8.09	8.07	8.59	9.07
	8H	22.62	23.09	23.14	23.61	24.10	7.71	8.18	8.23	8.69	9.18
	12H	22.77	23.19	23.29	23.68	24.25	7.79	8.21	8.31	8.70	9.27
12H	4H	21.59	22.16	22.08	22.64	23.12	7.32	7.89	7.81	8.38	8.85
	6H	22.32	22.79	22.84	23.30	23.79	7.69	8.16	8.21	8.67	9.17
	8H	22.58	22.99	23.09	23.49	24.06	7.87	8.28	8.38	8.78	9.35