

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: P1055300

Luminaire Tested: S122R3DR-H1005D940-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055300  
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-H1005D940-X4F0-XX-UDD-FLL-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

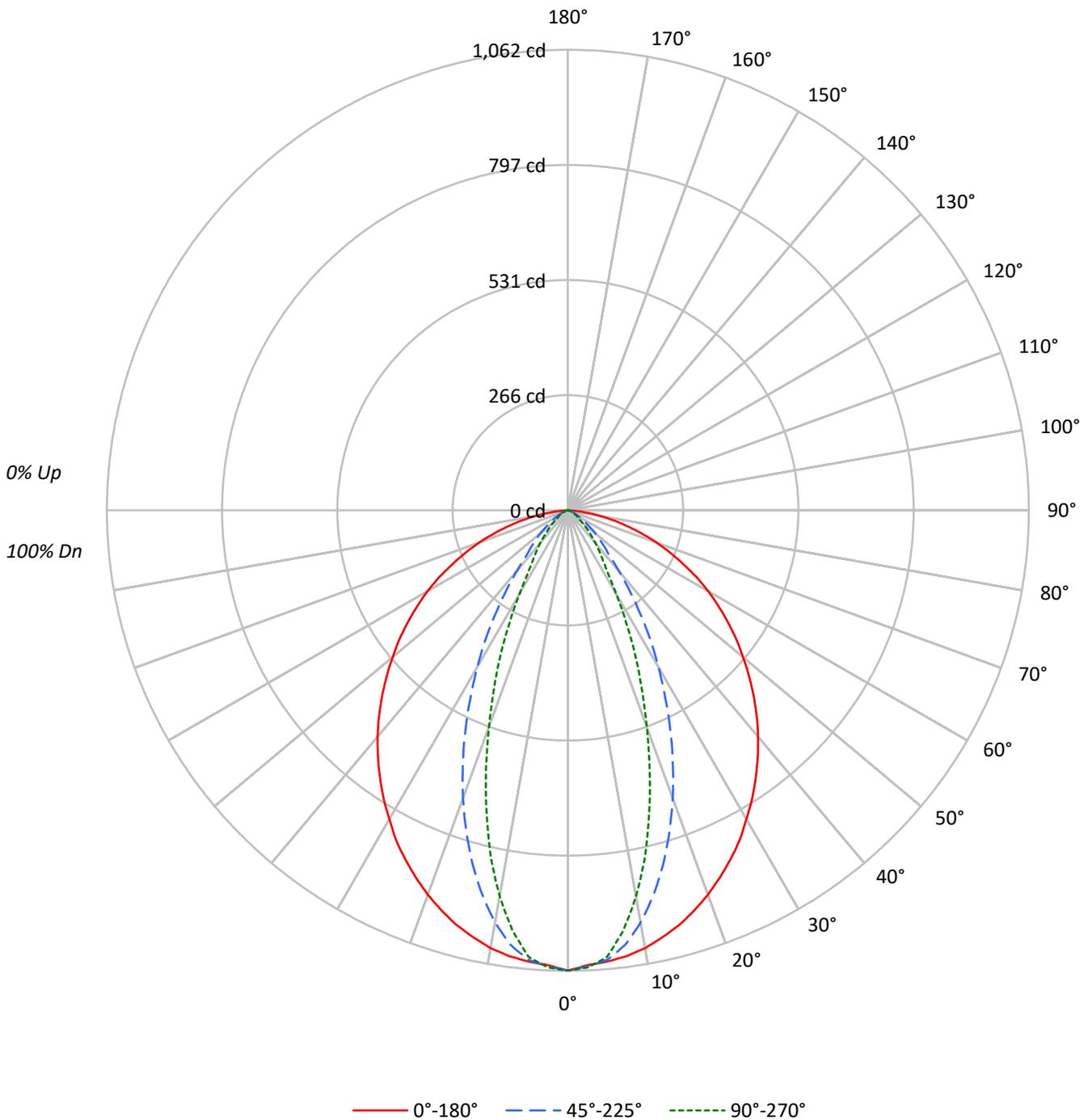
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1216.5 lumens  
Efficiency: N/A  
Efficacy: 33.2 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																		
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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90																												
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80																												
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71																												
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																												
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58																												
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53																												
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49																												
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45																												
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42																												
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39																												

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

	0°	45°	90°
0°	20111	20111	20111
5°	19866	19792	19669
10°	19721	18571	17393
15°	19418	16611	14187
20°	19017	14242	10702
25°	18546	11667	7643
30°	17987	9107	4868
35°	17451	6680	3250
40°	16860	4504	2446
45°	16207	3172	1742
50°	15530	2417	1226
55°	14867	1675	902
60°	14149	1133	739
65°	13122	816	583
70°	11960	648	504
75°	10380	571	381
80°	8237	426	426
85°	4521	565	283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16207 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.0	8.0
10°-20°	238.2	19.6
20°-30°	272.1	22.4
30°-40°	230.8	19.0
40°-50°	172.2	14.2
50°-60°	111.3	9.1
60°-70°	62.0	5.1
70°-80°	27.2	2.2
80°-90°	5.6	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°	607.4	49.9
0°-40°	838.2	68.9
0°-60°	1121.6	92.2
0°-90°	1216.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1216.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1045	1058	1041	1030	1034	99
15°	990	965	847	757	723	279
25°	887	783	558	408	366	408
35°	754	568	289	157	140	472
45°	605	359	118	77	65	467
55°	450	170	51	31	27	402
65°	293	62	18	14	13	291
75°	142	13	8	6	5	151
85°	21	1	3	1	1	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1061.5	1061.5	1061.5	1061.5	1061.5
2.5°	1049.8	1065.4	1052.4	1052.4	1055.0
5°	1044.6	1057.6	1040.7	1030.3	1034.2
7.5°	1036.8	1045.9	1010.8	979.6	977.0
10°	1025.1	1029.0	965.3	917.1	904.1
12.5°	1008.2	999.1	909.3	841.7	819.6
15°	990.0	965.3	846.9	757.1	723.3
17.5°	967.9	923.6	777.9	668.7	627.0
20°	943.2	880.7	706.4	576.3	530.8
22.5°	915.8	832.6	632.2	489.1	443.6
25°	887.2	783.1	558.1	408.5	365.6
27.5°	857.3	731.1	485.2	335.6	288.8
30°	822.2	677.8	416.3	265.4	222.5
32.5°	789.6	621.8	352.5	205.5	169.1
35°	754.5	568.5	288.8	157.4	140.5
37.5°	718.1	515.2	232.9	132.7	118.4
40°	681.7	461.8	182.1	111.9	98.9
42.5°	643.9	409.8	140.5	93.7	80.7
45°	604.9	359.0	118.4	76.8	65.0
47.5°	565.9	308.3	98.9	61.1	52.0
50°	526.9	260.2	82.0	48.1	41.6
52.5°	489.1	214.6	65.0	39.0	33.8
55°	450.1	170.4	50.7	31.2	27.3
57.5°	411.1	132.7	39.0	26.0	23.4
60°	373.4	100.2	29.9	20.8	19.5
62.5°	334.3	80.7	23.4	16.9	15.6
65°	292.7	62.4	18.2	14.3	13.0
67.5°	255.0	45.5	14.3	11.7	10.4
70°	215.9	31.2	11.7	10.4	9.1
72.5°	178.2	19.5	9.1	7.8	7.8
75°	141.8	13.0	7.8	6.5	5.2
77.5°	108.0	7.8	5.2	5.2	3.9
80°	75.5	5.2	3.9	3.9	3.9
82.5°	46.8	3.9	2.6	2.6	2.6
85°	20.8	1.3	2.6	1.3	1.3
87.5°	3.9	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	18.68	20.00	19.04	20.31	20.63	4.98	6.30	5.35	6.62	6.93
	3H	21.15	22.32	21.53	22.65	23.01	5.83	7.01	6.21	7.34	7.70
	4H	22.10	23.20	22.51	23.55	23.93	6.11	7.20	6.51	7.55	7.93
	6H	22.79	23.80	23.21	24.17	24.56	6.30	7.30	6.72	7.67	8.07
	8H	22.99	23.94	23.42	24.33	24.73	6.38	7.33	6.81	7.72	8.12
	12H	23.07	23.98	23.50	24.36	24.79	6.40	7.31	6.83	7.69	8.12
4H	2H	18.46	19.56	18.87	19.91	20.29	5.56	6.65	5.96	7.00	7.38
	3H	20.95	21.84	21.36	22.25	22.65	6.59	7.48	7.00	7.89	8.29
	4H	21.89	22.69	22.33	23.11	23.55	6.96	7.76	7.39	8.18	8.62
	6H	22.65	23.34	23.11	23.78	24.25	7.25	7.94	7.71	8.38	8.85
	8H	22.89	23.53	23.36	23.98	24.45	7.35	7.99	7.82	8.44	8.91
	12H	23.02	23.59	23.50	24.07	24.54	7.39	7.96	7.88	8.44	8.92
8H	4H	21.76	22.40	22.23	22.85	23.32	7.33	7.97	7.80	8.42	8.89
	6H	22.50	23.02	23.00	23.52	24.00	7.69	8.21	8.19	8.71	9.19
	8H	22.74	23.21	23.26	23.73	24.22	7.83	8.30	8.35	8.81	9.31
	12H	22.89	23.31	23.41	23.80	24.37	7.91	8.32	8.43	8.82	9.39
12H	4H	21.71	22.28	22.20	22.77	23.24	7.45	8.02	7.94	8.50	8.98
	6H	22.44	22.91	22.96	23.42	23.92	7.81	8.28	8.33	8.79	9.29
	8H	22.70	23.12	23.22	23.61	24.18	7.99	8.40	8.50	8.90	9.47