

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: P1060688

Luminaire Tested: S124RDRP-H1020D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060688  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1020D940-X4F0-XX-UDD-BVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

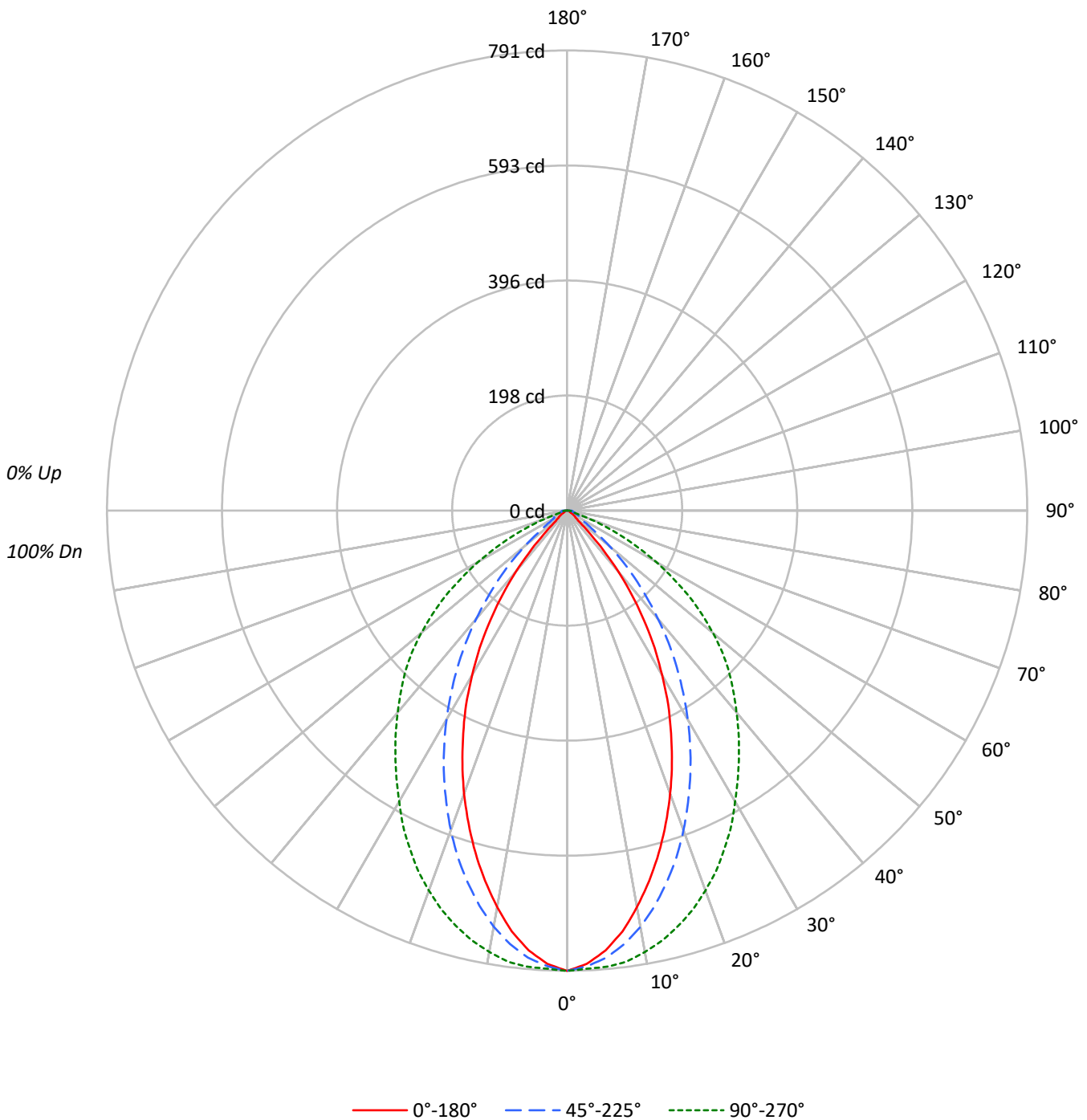
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 993.1 lumens  
Efficiency: N/A  
Efficacy: 31.8 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	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	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	6814	6814	6814
5°	6559	6668	6804
10°	6049	6351	6736
15°	5429	5896	6587
20°	4745	5359	6368
25°	4013	4760	6085
30°	3242	4127	5742
35°	2413	3449	5410
40°	1532	2734	5090
45°	613	2004	4799
50°	267	1278	4381
55°	204	661	3824
60°	145	451	3033
65°	106	448	2072
70°	106	395	949
75°	140	419	383
80°	208	466	417
85°	415	830	622

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4799 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	7.3
10°-20°	186.8	18.8
20°-30°	236.0	23.8
30°-40°	216.7	21.8
40°-50°	147.8	14.9
50°-60°	80.1	8.1
60°-70°	34.0	3.4
70°-80°	11.8	1.2
80°-90°	7.5	0.8
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°	495.2	49.9
0°-40°	712.0	71.7
0°-60°	939.9	94.6
0°-90°	993.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	993.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	791	791	791	791	791	
5°	759	770	771	778	787	70
15°	609	629	661	708	739	170
25°	422	450	501	579	640	193
35°	230	260	328	431	515	143
45°	50	81	165	291	394	46
55°	14	15	44	160	255	12
65°	5	6	22	50	102	5
75°	4	12	13	12	12	4
85°	4	8	8	8	6	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	791.3	791.3	791.3	791.3	791.3
2.5°	779.8	789.2	784.0	786.1	788.2
5°	758.8	770.4	771.4	777.7	787.1
7.5°	729.5	743.1	751.5	767.2	781.9
10°	691.8	708.5	726.3	751.5	770.4
12.5°	651.9	669.7	695.9	731.6	756.7
15°	609.0	628.9	661.4	708.5	738.9
17.5°	563.9	585.9	624.7	680.2	719.0
20°	517.8	541.9	584.8	647.7	694.9
22.5°	470.6	495.8	542.9	614.2	669.7
25°	422.4	449.6	501.0	578.6	640.4
27.5°	376.3	401.4	458.0	542.9	611.0
30°	326.0	354.3	415.1	506.2	577.5
32.5°	279.8	307.1	371.0	468.5	546.1
35°	229.5	259.9	328.1	430.8	514.6
37.5°	182.4	211.7	286.1	395.1	484.2
40°	136.3	166.6	243.2	359.5	452.8
42.5°	91.2	123.7	202.3	322.8	423.4
45°	50.3	80.7	164.6	291.4	394.1
47.5°	26.2	44.0	128.9	259.9	362.6
50°	19.9	24.1	95.4	225.3	327.0
52.5°	16.8	17.8	65.0	190.8	291.4
55°	13.6	14.7	44.0	160.4	254.7
57.5°	10.5	11.5	31.4	131.0	213.8
60°	8.4	9.4	26.2	100.6	176.1
62.5°	6.3	7.3	25.2	74.4	138.4
65°	5.2	6.3	22.0	50.3	101.7
67.5°	4.2	6.3	18.9	32.5	68.1
70°	4.2	8.4	15.7	21.0	37.7
72.5°	4.2	9.4	13.6	13.6	13.6
75°	4.2	11.5	12.6	11.5	11.5
77.5°	4.2	10.5	10.5	10.5	10.5
80°	4.2	9.4	9.4	9.4	8.4
82.5°	4.2	8.4	9.4	9.4	7.3
85°	4.2	8.4	8.4	8.4	6.3
87.5°	3.1	8.4	8.4	8.4	4.2
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	0.00	0.00	0.00	0.00	0.00	15.11	16.38	15.47	16.70	17.01
	3H	0.00	0.00	0.00	0.08	0.44	15.46	16.59	15.84	16.92	17.29
	4H	0.00	1.05	0.41	1.40	1.79	15.43	16.48	15.83	16.83	17.22
	6H	1.37	2.34	1.79	2.71	3.10	15.41	16.37	15.82	16.74	17.13
	8H	2.06	2.97	2.49	3.36	3.76	15.39	16.31	15.83	16.70	17.10
	12H	2.86	3.73	3.29	4.12	4.55	15.39	16.26	15.83	16.65	17.08
4H	2H	0.80	1.85	1.21	2.20	2.59	14.91	15.96	15.32	16.31	16.70
	3H	2.23	3.08	2.64	3.49	3.89	15.31	16.16	15.72	16.57	16.97
	4H	3.67	4.44	4.11	4.86	5.30	15.29	16.05	15.72	16.47	16.91
	6H	4.92	5.58	5.38	6.03	6.49	15.30	15.96	15.77	16.41	16.88
	8H	5.49	6.11	5.96	6.55	7.03	15.31	15.93	15.78	16.38	16.85
	12H	6.17	6.71	6.66	7.20	7.67	15.35	15.89	15.84	16.38	16.85
8H	4H	4.75	5.37	5.22	5.81	6.28	15.19	15.80	15.66	16.25	16.72
	6H	6.36	6.86	6.86	7.36	7.84	15.24	15.74	15.74	16.24	16.72
	8H	7.20	7.65	7.72	8.16	8.66	15.29	15.74	15.82	16.26	16.75
	12H	8.17	8.57	8.68	9.06	9.63	15.41	15.81	15.93	16.30	16.88
12H	4H	4.94	5.48	5.43	5.96	6.44	15.15	15.69	15.64	16.17	16.65
	6H	6.70	7.16	7.23	7.67	8.17	15.20	15.66	15.73	16.17	16.67
	8H	7.73	8.13	8.24	8.62	9.20	15.31	15.71	15.82	16.20	16.78