

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: P1060682

Luminaire Tested: S124RDR-H1020D935-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060682  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D935-X4F0-XX-UDD-SVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

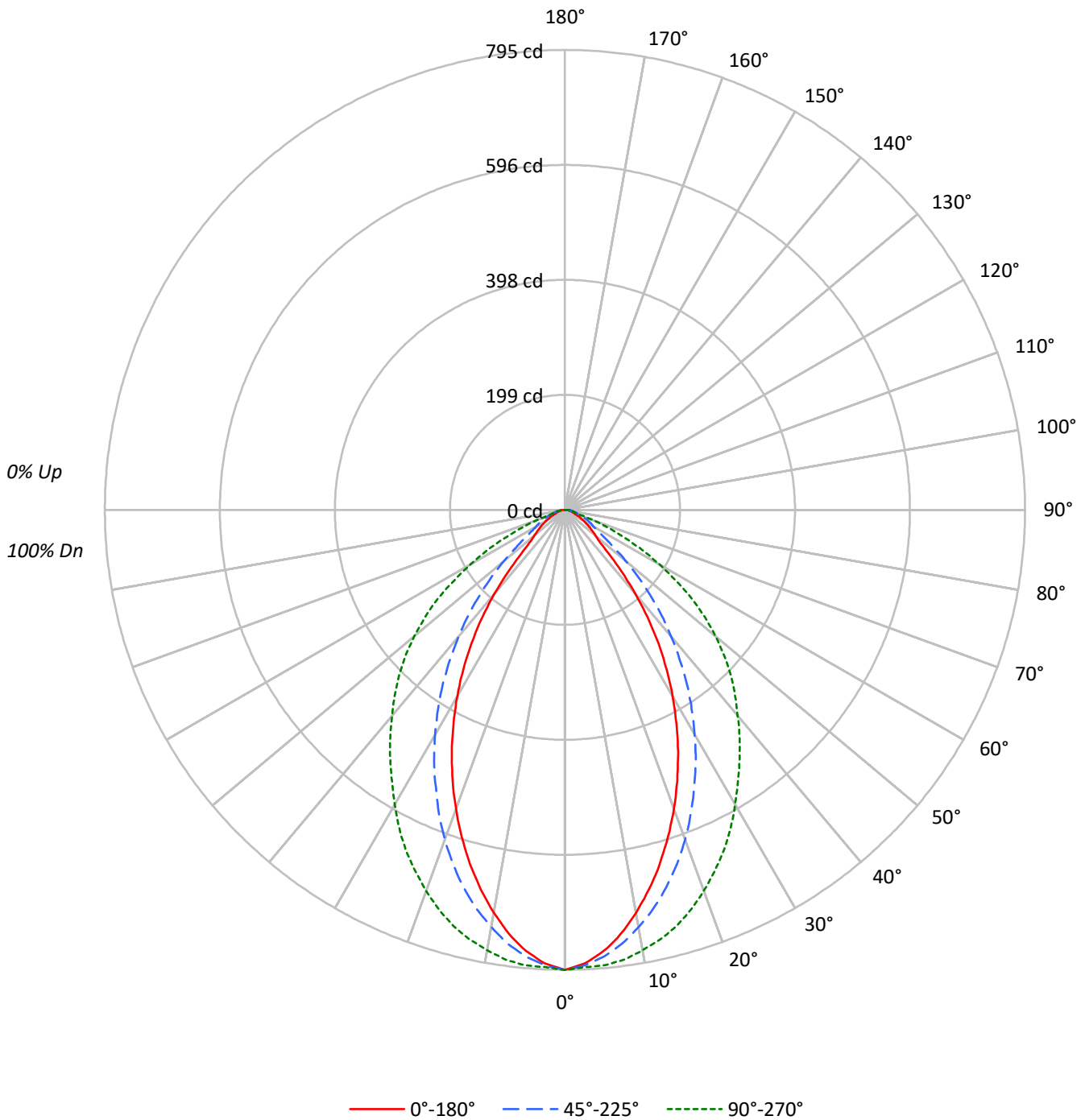
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1118.3 lumens  
Efficiency: N/A  
Efficacy: 35.8 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
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 (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	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	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79				79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	67	75	70	66	73	68	65	63				63
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	59	57				57
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51				51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47				47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43				43
9	65	54	47	42	64	53	46	42	52	46	41	51	45	41	50	45	41	39				39
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	36				36

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

	0°	45°	90°
0°	6848	6848	6848
5°	6620	6699	6831
10°	6184	6405	6759
15°	5647	6026	6639
20°	5044	5563	6426
25°	4393	5019	6172
30°	3702	4457	5846
35°	2957	3861	5530
40°	2127	3207	5220
45°	1281	2526	4941
50°	922	1830	4541
55°	775	1231	4025
60°	627	977	3241
65°	495	886	2329
70°	433	738	1249
75°	403	672	606
80°	402	704	550
85°	603	998	701

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4941 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.0	6.5
10°-20°	191.3	17.1
20°-30°	248.2	22.2
30°-40°	238.6	21.3
40°-50°	177.0	15.8
50°-60°	108.4	9.7
60°-70°	52.7	4.7
70°-80°	20.1	1.8
80°-90°	9.0	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°	512.5	45.8
0°-40°	751.1	67.2
0°-60°	1036.5	92.7
0°-90°	1118.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1118.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	795	795	795	795	795	
5°	766	777	775	782	790	71
15°	633	652	676	716	745	177
25°	462	486	528	596	650	211
35°	281	307	367	454	526	174
45°	105	132	207	317	406	87
55°	52	54	82	185	268	46
65°	24	26	44	69	114	25
75°	12	19	20	18	18	13
85°	6	10	10	9	7	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	795.3	795.3	795.3	795.3	795.3
2.5°	785.2	794.3	788.2	790.2	791.2
5°	765.9	777.1	775.0	782.1	790.2
7.5°	739.6	752.8	756.8	771.0	784.1
10°	707.2	723.4	732.5	755.8	773.0
12.5°	671.8	689.0	706.2	737.6	760.9
15°	633.4	651.6	675.9	716.4	744.7
17.5°	592.9	613.2	642.5	691.1	724.4
20°	550.4	571.7	607.1	660.7	701.2
22.5°	506.9	529.2	568.6	628.3	675.9
25°	462.4	485.7	528.2	595.9	649.6
27.5°	416.9	441.1	489.7	561.5	620.2
30°	372.3	395.6	448.2	526.1	587.9
32.5°	326.8	351.1	407.8	489.7	556.5
35°	281.3	306.6	367.3	454.3	526.1
37.5°	234.7	262.1	325.8	419.9	495.8
40°	189.2	215.5	285.3	384.5	464.4
42.5°	144.7	173.0	246.9	349.1	435.1
45°	105.2	131.5	207.4	316.7	405.7
47.5°	78.9	95.1	171.0	286.3	373.4
50°	68.8	71.8	136.6	252.9	339.0
52.5°	59.7	61.7	106.2	216.5	304.6
55°	51.6	53.6	82.0	185.2	268.1
57.5°	43.5	45.5	65.8	154.8	226.6
60°	36.4	38.4	56.7	123.4	188.2
62.5°	30.4	31.4	50.6	94.1	150.8
65°	24.3	26.3	43.5	68.8	114.3
67.5°	20.2	22.3	35.4	47.6	79.9
70°	17.2	22.3	29.3	33.4	49.6
72.5°	14.2	20.2	24.3	23.3	23.3
75°	12.1	19.2	20.2	18.2	18.2
77.5°	10.1	17.2	16.2	15.2	14.2
80°	8.1	14.2	14.2	12.1	11.1
82.5°	7.1	11.1	11.1	11.1	9.1
85°	6.1	10.1	10.1	9.1	7.1
87.5°	4.0	8.1	9.1	8.1	5.1
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	6.49	7.83	6.86	8.14	8.46	15.60	16.94	15.96	17.25	17.56
	3H	7.54	8.73	7.92	9.06	9.42	16.10	17.29	16.48	17.62	17.98
	4H	8.05	9.16	8.46	9.51	9.89	16.11	17.22	16.52	17.57	17.95
	6H	8.50	9.52	8.92	9.89	10.29	16.11	17.13	16.53	17.50	17.89
	8H	8.70	9.66	9.13	10.05	10.46	16.11	17.07	16.54	17.46	17.87
	12H	8.91	9.83	9.34	10.22	10.65	16.11	17.03	16.54	17.41	17.84
4H	2H	7.59	8.70	7.99	9.05	9.43	15.49	16.59	15.89	16.94	17.33
	3H	8.86	9.77	9.27	10.17	10.57	16.06	16.97	16.48	17.37	17.78
	4H	9.56	10.37	10.00	10.79	11.24	16.11	16.92	16.55	17.34	17.78
	6H	10.20	10.90	10.66	11.34	11.81	16.16	16.86	16.63	17.31	17.78
	8H	10.44	11.10	10.91	11.54	12.01	16.18	16.83	16.65	17.28	17.75
	12H	10.72	11.30	11.21	11.78	12.25	16.21	16.79	16.70	17.27	17.75
8H	4H	9.99	10.65	10.46	11.09	11.56	16.06	16.71	16.53	17.16	17.63
	6H	10.87	11.41	11.37	11.90	12.38	16.15	16.69	16.66	17.19	17.67
	8H	11.28	11.76	11.80	12.27	12.76	16.21	16.70	16.74	17.21	17.70
	12H	11.76	12.18	12.27	12.68	13.25	16.31	16.74	16.83	17.23	17.80
12H	4H	10.04	10.61	10.52	11.10	11.57	16.03	16.61	16.52	17.09	17.57
	6H	10.98	11.46	11.50	11.98	12.47	16.13	16.61	16.65	17.13	17.62
	8H	11.50	11.93	12.01	12.42	12.99	16.24	16.66	16.75	17.16	17.73