

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: P1060679

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060679  
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: S124RDR-H1020D935-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: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

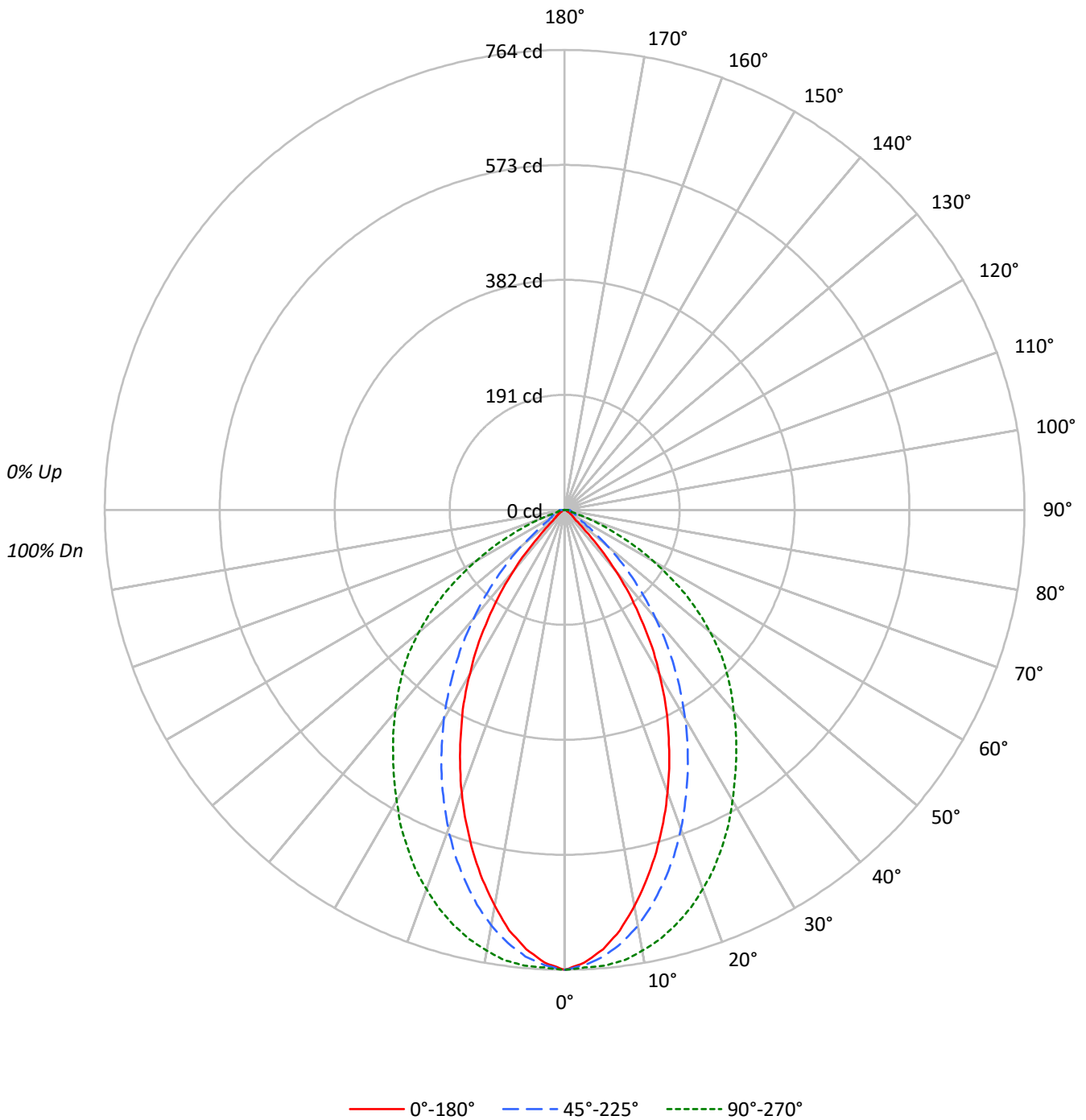
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 958.9 lumens  
Efficiency: N/A  
Efficacy: 30.7 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 (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				
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°	6580	6580	6580
5°	6333	6438	6569
10°	5840	6132	6504
15°	5242	5693	6361
20°	4581	5175	6149
25°	3875	4596	5875
30°	3129	3985	5544
35°	2330	3330	5224
40°	1479	2639	4915
45°	592	1935	4634
50°	257	1234	4229
55°	198	638	3692
60°	140	436	2928
65°	104	434	2001
70°	101	383	916
75°	133	403	369
80°	198	451	402
85°	395	800	603

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4634 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.9	7.3
10°-20°	180.4	18.8
20°-30°	227.8	23.8
30°-40°	209.3	21.8
40°-50°	142.7	14.9
50°-60°	77.4	8.1
60°-70°	32.8	3.4
70°-80°	11.3	1.2
80°-90°	7.2	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°	478.2	49.9
0°-40°	687.5	71.7
0°-60°	907.6	94.6
0°-90°	958.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	958.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	764	764	764	764	764	
5°	733	744	745	751	760	68
15°	588	607	639	684	714	164
25°	408	434	484	559	618	186
35°	222	251	317	416	497	138
45°	49	78	159	281	380	45
55°	13	14	42	155	246	12
65°	5	6	21	49	98	5
75°	4	11	12	11	11	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°	764.1	764.1	764.1	764.1	764.1
2.5°	752.9	762.0	757.0	759.0	761.0
5°	732.7	743.8	744.8	750.9	760.0
7.5°	704.4	717.5	725.6	740.8	755.0
10°	667.9	684.1	701.3	725.6	743.8
12.5°	629.5	646.7	672.0	706.4	730.7
15°	588.0	607.2	638.6	684.1	713.5
17.5°	544.5	565.7	603.2	656.8	694.2
20°	499.9	523.2	564.7	625.4	671.0
22.5°	454.4	478.7	524.2	593.0	646.7
25°	407.8	434.2	483.7	558.6	618.3
27.5°	363.3	387.6	442.2	524.2	590.0
30°	314.7	342.1	400.8	488.8	557.6
32.5°	270.2	296.5	358.3	452.4	527.3
35°	221.6	251.0	316.8	415.9	496.9
37.5°	176.1	204.4	276.3	381.5	467.6
40°	131.6	160.9	234.8	347.1	437.2
42.5°	88.0	119.4	195.3	311.7	408.9
45°	48.6	77.9	158.9	281.3	380.5
47.5°	25.3	42.5	124.5	251.0	350.2
50°	19.2	23.3	92.1	217.6	315.7
52.5°	16.2	17.2	62.7	184.2	281.3
55°	13.2	14.2	42.5	154.8	245.9
57.5°	10.1	11.1	30.4	126.5	206.5
60°	8.1	9.1	25.3	97.2	170.0
62.5°	6.1	7.1	24.3	71.9	133.6
65°	5.1	6.1	21.3	48.6	98.2
67.5°	4.0	6.1	18.2	31.4	65.8
70°	4.0	8.1	15.2	20.2	36.4
72.5°	4.0	9.1	13.2	13.2	13.2
75°	4.0	11.1	12.1	11.1	11.1
77.5°	4.0	10.1	10.1	10.1	10.1
80°	4.0	9.1	9.1	9.1	8.1
82.5°	4.0	8.1	9.1	9.1	7.1
85°	4.0	8.1	8.1	8.1	6.1
87.5°	3.0	8.1	8.1	8.1	4.0
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	14.99	16.26	15.35	16.58	16.89
	3H	0.00	0.00	0.00	0.00	0.31	15.34	16.47	15.72	16.80	17.17
	4H	0.00	0.91	0.26	1.26	1.64	15.31	16.36	15.71	16.71	17.09
	6H	1.22	2.18	1.63	2.55	2.95	15.28	16.25	15.70	16.62	17.01
	8H	1.90	2.81	2.33	3.20	3.60	15.27	16.18	15.71	16.58	16.98
	12H	2.69	3.56	3.13	3.95	4.38	15.27	16.14	15.71	16.53	16.96
4H	2H	0.69	1.74	1.09	2.09	2.47	14.79	15.84	15.19	16.19	16.58
	3H	2.11	2.96	2.52	3.37	3.77	15.19	16.04	15.60	16.45	16.85
	4H	3.55	4.31	3.98	4.73	5.18	15.17	15.93	15.60	16.35	16.79
	6H	4.79	5.45	5.25	5.89	6.36	15.18	15.84	15.65	16.29	16.76
	8H	5.35	5.97	5.82	6.42	6.89	15.19	15.81	15.66	16.26	16.73
	12H	6.02	6.57	6.51	7.05	7.52	15.23	15.77	15.72	16.26	16.73
8H	4H	4.62	5.24	5.09	5.69	6.16	15.07	15.68	15.54	16.13	16.60
	6H	6.23	6.73	6.73	7.23	7.71	15.12	15.62	15.62	16.12	16.60
	8H	7.06	7.52	7.59	8.03	8.52	15.17	15.62	15.70	16.14	16.63
	12H	8.03	8.43	8.54	8.92	9.49	15.29	15.69	15.81	16.18	16.76
12H	4H	4.81	5.35	5.30	5.84	6.31	15.03	15.57	15.51	16.05	16.53
	6H	6.58	7.03	7.10	7.55	8.04	15.08	15.54	15.61	16.05	16.54
	8H	7.60	8.00	8.11	8.49	9.07	15.19	15.59	15.70	16.08	16.66