

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: P1060628

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060628  
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-H1020D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

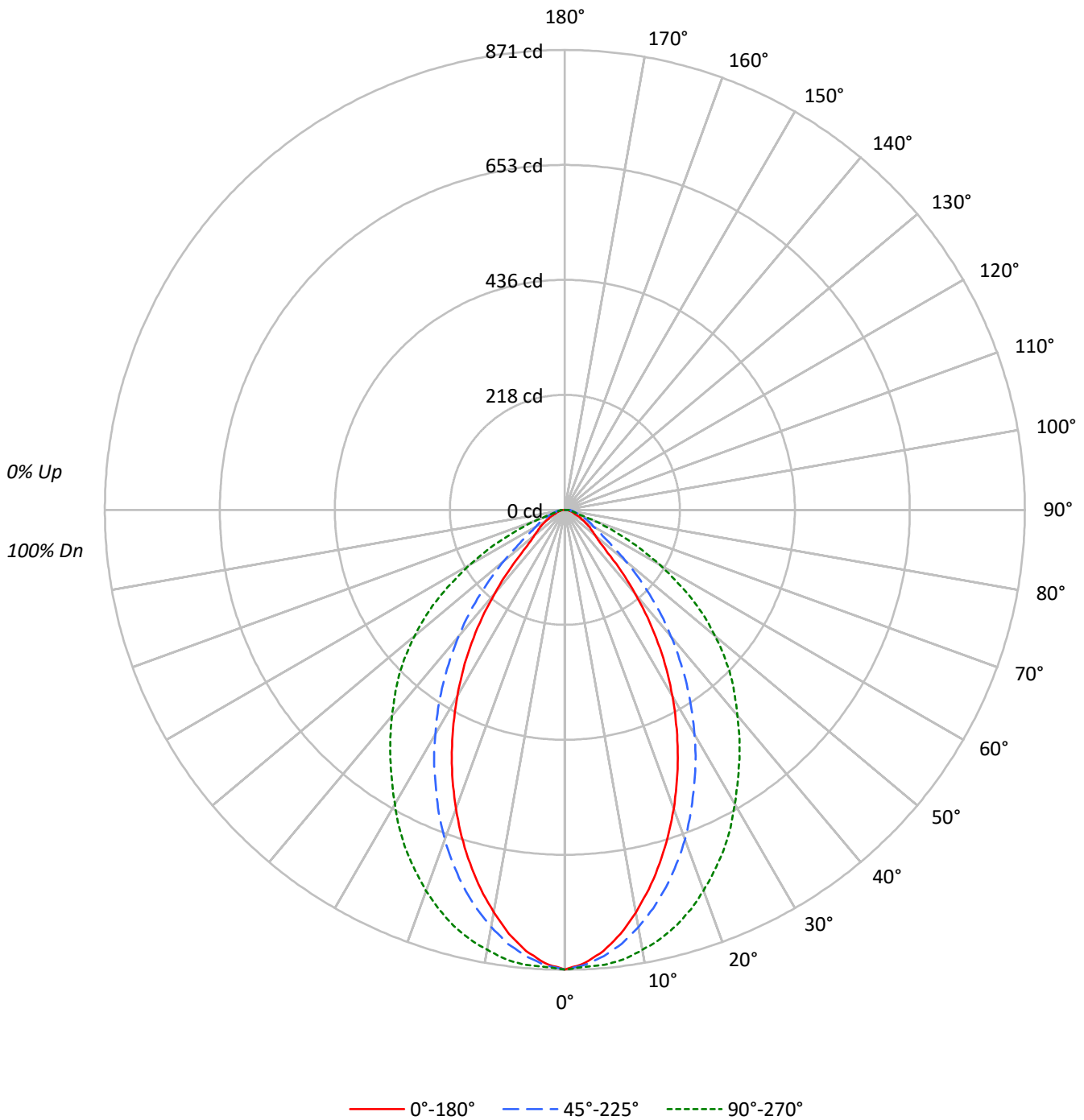
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1224.2 lumens  
Efficiency: N/A  
Efficacy: 39.2 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	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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																																				
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79																																				
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70																																				
4	90	80	73	68	88	79	72	67	77	71	67	75	70	66	73	68	65	63																																				
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	59	57																																				
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51																																				
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47																																				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43																																				
9	65	54	46	42	64	53	46	42	52	46	41	51	45	41	50	45	41	39																																				
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	36																																				

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

	0°	45°	90°
0°	7497	7497	7497
5°	7248	7334	7478
10°	6770	7012	7399
15°	6182	6596	7267
20°	5521	6090	7034
25°	4810	5494	6756
30°	4053	4879	6398
35°	3237	4227	6055
40°	2328	3512	5715
45°	1403	2766	5409
50°	1009	2003	4971
55°	848	1347	4406
60°	687	1068	3548
65°	542	970	2551
70°	473	808	1367
75°	443	739	662
80°	441	769	605
85°	652	1097	771

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5409 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	6.5
10°-20°	209.4	17.1
20°-30°	271.7	22.2
30°-40°	261.2	21.3
40°-50°	193.8	15.8
50°-60°	118.7	9.7
60°-70°	57.7	4.7
70°-80°	22.0	1.8
80°-90°	9.9	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°	561.0	45.8
0°-40°	822.2	67.2
0°-60°	1134.7	92.7
0°-90°	1224.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1224.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	871	871	871	871	871	
5°	838	851	848	856	865	78
15°	693	713	740	784	815	194
25°	506	532	578	652	711	231
35°	308	336	402	497	576	191
45°	115	144	227	347	444	96
55°	56	59	90	203	294	51
65°	27	29	48	75	125	27
75°	13	21	22	20	20	14
85°	7	11	11	10	8	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	870.6	870.6	870.6	870.6	870.6
2.5°	859.5	869.5	862.8	865.1	866.2
5°	838.5	850.7	848.4	856.2	865.1
7.5°	809.7	824.1	828.5	844.0	858.4
10°	774.2	792.0	801.9	827.4	846.2
12.5°	735.5	754.3	773.1	807.5	832.9
15°	693.4	713.3	739.9	784.2	815.2
17.5°	649.1	671.2	703.3	756.5	793.1
20°	602.5	625.8	664.6	723.3	767.6
22.5°	554.9	579.3	622.5	687.8	739.9
25°	506.2	531.7	578.2	652.4	711.1
27.5°	456.3	482.9	536.1	614.7	679.0
30°	407.6	433.1	490.7	576.0	643.5
32.5°	357.8	384.3	446.4	536.1	609.2
35°	307.9	335.6	402.1	497.3	576.0
37.5°	257.0	286.9	356.7	459.7	542.7
40°	207.1	235.9	312.4	420.9	508.4
42.5°	158.4	189.4	270.3	382.1	476.3
45°	115.2	144.0	227.1	346.7	444.2
47.5°	86.4	104.1	187.2	313.5	408.7
50°	75.3	78.6	149.5	276.9	371.1
52.5°	65.3	67.6	116.3	237.0	333.4
55°	56.5	58.7	89.7	202.7	293.5
57.5°	47.6	49.8	72.0	169.5	248.1
60°	39.9	42.1	62.0	135.1	206.0
62.5°	33.2	34.3	55.4	103.0	165.0
65°	26.6	28.8	47.6	75.3	125.2
67.5°	22.2	24.4	38.8	52.1	87.5
70°	18.8	24.4	32.1	36.6	54.3
72.5°	15.5	22.2	26.6	25.5	25.5
75°	13.3	21.0	22.2	19.9	19.9
77.5°	11.1	18.8	17.7	16.6	15.5
80°	8.9	15.5	15.5	13.3	12.2
82.5°	7.8	12.2	12.2	12.2	10.0
85°	6.6	11.1	11.1	10.0	7.8
87.5°	4.4	8.9	10.0	8.9	5.5
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	6.81	8.15	7.17	8.46	8.77	15.91	17.25	16.28	17.56	17.88
	3H	7.86	9.04	8.23	9.37	9.74	16.41	17.60	16.79	17.93	18.30
	4H	8.37	9.48	8.77	9.83	10.21	16.43	17.53	16.83	17.89	18.27
	6H	8.82	9.84	9.24	10.21	10.60	16.43	17.44	16.84	17.81	18.21
	8H	9.01	9.98	9.44	10.37	10.77	16.42	17.39	16.85	17.78	18.18
	12H	9.23	10.15	9.66	10.53	10.96	16.42	17.34	16.86	17.73	18.16
4H	2H	7.90	9.01	8.30	9.36	9.74	15.80	16.91	16.20	17.26	17.64
	3H	9.18	10.08	9.59	10.49	10.89	16.38	17.29	16.79	17.69	18.09
	4H	9.88	10.69	10.31	11.11	11.55	16.43	17.24	16.86	17.66	18.10
	6H	10.51	11.21	10.97	11.66	12.12	16.48	17.18	16.94	17.62	18.09
	8H	10.76	11.41	11.23	11.86	12.33	16.50	17.15	16.96	17.60	18.07
	12H	11.03	11.61	11.52	12.10	12.57	16.53	17.11	17.02	17.59	18.06
8H	4H	10.31	10.96	10.78	11.41	11.88	16.38	17.03	16.84	17.48	17.95
	6H	11.19	11.72	11.69	12.22	12.70	16.47	17.00	16.97	17.50	17.98
	8H	11.59	12.07	12.11	12.59	13.08	16.53	17.01	17.05	17.53	18.02
	12H	12.07	12.50	12.59	12.99	13.56	16.63	17.06	17.15	17.55	18.12
12H	4H	10.35	10.93	10.84	11.41	11.88	16.35	16.93	16.83	17.41	17.88
	6H	11.30	11.78	11.82	12.29	12.79	16.45	16.93	16.97	17.44	17.94
	8H	11.82	12.24	12.33	12.74	13.31	16.55	16.98	17.07	17.47	18.05