

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: P1060637

Luminaire Tested: S124RDR-H1020D835-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060637  
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-H1020D835-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, 80 CRI LEDS  
Ballast/Driver: -

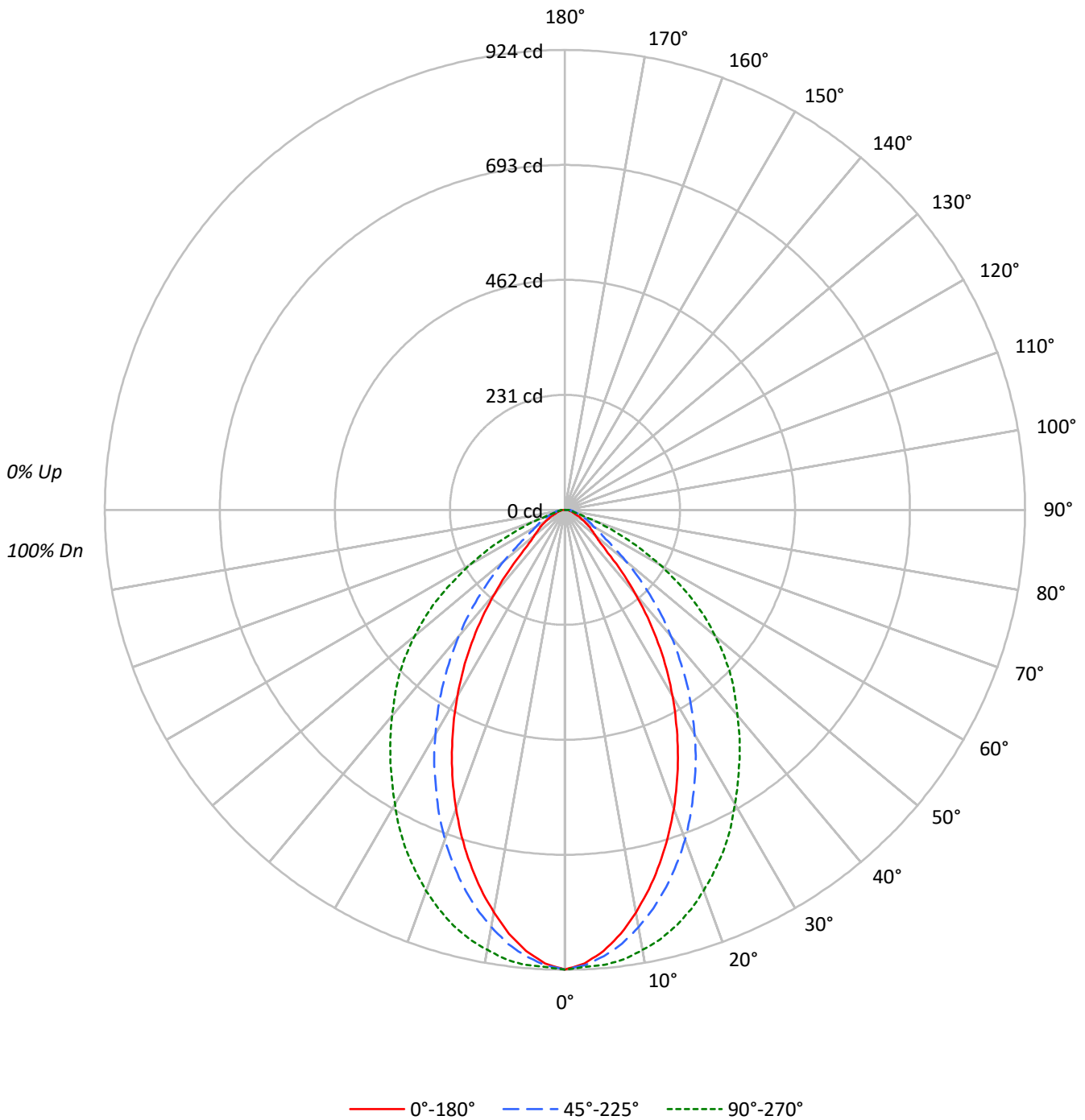
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1298.8 lumens  
Efficiency: N/A  
Efficacy: 41.6 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°	7954	7954	7954
5°	7690	7781	7933
10°	7182	7439	7850
15°	6558	6998	7710
20°	5858	6461	7463
25°	5102	5828	7168
30°	4300	5176	6789
35°	3434	4485	6424
40°	2471	3725	6063
45°	1488	2934	5738
50°	1070	2125	5274
55°	899	1429	4675
60°	729	1133	3765
65°	575	1029	2706
70°	504	859	1450
75°	469	782	705
80°	466	818	640
85°	701	1166	810

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5738 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	6.5
10°-20°	222.2	17.1
20°-30°	288.3	22.2
30°-40°	277.1	21.3
40°-50°	205.6	15.8
50°-60°	125.9	9.7
60°-70°	61.2	4.7
70°-80°	23.3	1.8
80°-90°	10.5	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°	595.2	45.8
0°-40°	872.4	67.2
0°-60°	1203.9	92.7
0°-90°	1298.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1298.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	890	902	900	908	918	83
15°	736	757	785	832	865	205
25°	537	564	613	692	754	245
35°	327	356	427	528	611	202
45°	122	153	241	368	471	101
55°	60	62	95	215	311	54
65°	28	31	50	80	133	29
75°	14	22	24	21	21	15
85°	7	12	12	11	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	923.7	923.7	923.7	923.7	923.7
2.5°	911.9	922.5	915.4	917.8	919.0
5°	889.6	902.5	900.2	908.4	917.8
7.5°	859.0	874.3	879.0	895.5	910.7
10°	821.4	840.2	850.8	877.8	897.8
12.5°	780.3	800.3	820.3	856.7	883.7
15°	735.6	756.8	785.0	832.0	864.9
17.5°	688.6	712.1	746.2	802.6	841.4
20°	639.3	664.0	705.1	767.4	814.4
22.5°	588.7	614.6	660.4	729.8	785.0
25°	537.0	564.1	613.4	692.2	754.4
27.5°	484.2	512.4	568.8	652.2	720.4
30°	432.5	459.5	520.6	611.1	682.8
32.5°	379.6	407.8	473.6	568.8	646.3
35°	326.7	356.1	426.6	527.6	611.1
37.5°	272.6	304.4	378.4	487.7	575.8
40°	219.8	250.3	331.4	446.6	539.4
42.5°	168.0	201.0	286.7	405.4	505.3
45°	122.2	152.8	240.9	367.8	471.2
47.5°	91.7	110.5	198.6	332.6	433.6
50°	79.9	83.4	158.6	293.8	393.7
52.5°	69.3	71.7	123.4	251.5	353.7
55°	59.9	62.3	95.2	215.1	311.4
57.5°	50.5	52.9	76.4	179.8	263.2
60°	42.3	44.7	65.8	143.4	218.6
62.5°	35.3	36.4	58.8	109.3	175.1
65°	28.2	30.6	50.5	79.9	132.8
67.5°	23.5	25.9	41.1	55.2	92.8
70°	20.0	25.9	34.1	38.8	57.6
72.5°	16.5	23.5	28.2	27.0	27.0
75°	14.1	22.3	23.5	21.2	21.2
77.5°	11.8	20.0	18.8	17.6	16.5
80°	9.4	16.5	16.5	14.1	12.9
82.5°	8.2	12.9	12.9	12.9	10.6
85°	7.1	11.8	11.8	10.6	8.2
87.5°	4.7	9.4	10.6	9.4	5.9
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	7.02	8.36	7.38	8.67	8.99	16.12	17.46	16.48	17.77	18.08
	3H	8.07	9.25	8.45	9.58	9.95	16.62	17.81	17.00	18.14	18.50
	4H	8.58	9.69	8.98	10.04	10.42	16.63	17.74	17.04	18.09	18.47
	6H	9.03	10.05	9.45	10.42	10.81	16.63	17.65	17.05	18.02	18.41
	8H	9.22	10.19	9.65	10.58	10.98	16.63	17.59	17.06	17.98	18.39
	12H	9.44	10.36	9.87	10.74	11.17	16.63	17.55	17.06	17.93	18.36
4H	2H	8.11	9.22	8.51	9.57	9.95	16.01	17.11	16.41	17.46	17.85
	3H	9.38	10.29	9.80	10.69	11.10	16.58	17.49	17.00	17.89	18.30
	4H	10.09	10.90	10.52	11.32	11.76	16.63	17.44	17.07	17.86	18.30
	6H	10.72	11.42	11.18	11.87	12.33	16.68	17.38	17.15	17.83	18.30
	8H	10.97	11.62	11.43	12.07	12.54	16.70	17.35	17.17	17.80	18.27
	12H	11.24	11.82	11.73	12.30	12.78	16.73	17.31	17.22	17.79	18.27
8H	4H	10.52	11.17	10.98	11.62	12.09	16.58	17.23	17.05	17.68	18.15
	6H	11.40	11.93	11.90	12.43	12.91	16.67	17.21	17.18	17.71	18.19
	8H	11.80	12.28	12.32	12.80	13.29	16.73	17.22	17.26	17.73	18.22
	12H	12.28	12.71	12.80	13.20	13.77	16.83	17.26	17.35	17.75	18.32
12H	4H	10.56	11.14	11.04	11.62	12.09	16.55	17.13	17.04	17.61	18.09
	6H	11.51	11.99	12.03	12.50	13.00	16.65	17.13	17.17	17.65	18.14
	8H	12.02	12.45	12.54	12.94	13.51	16.76	17.18	17.27	17.68	18.25