

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: P1060640

Luminaire Tested: S124RDRP-H1020D835-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060640  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1020D835-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

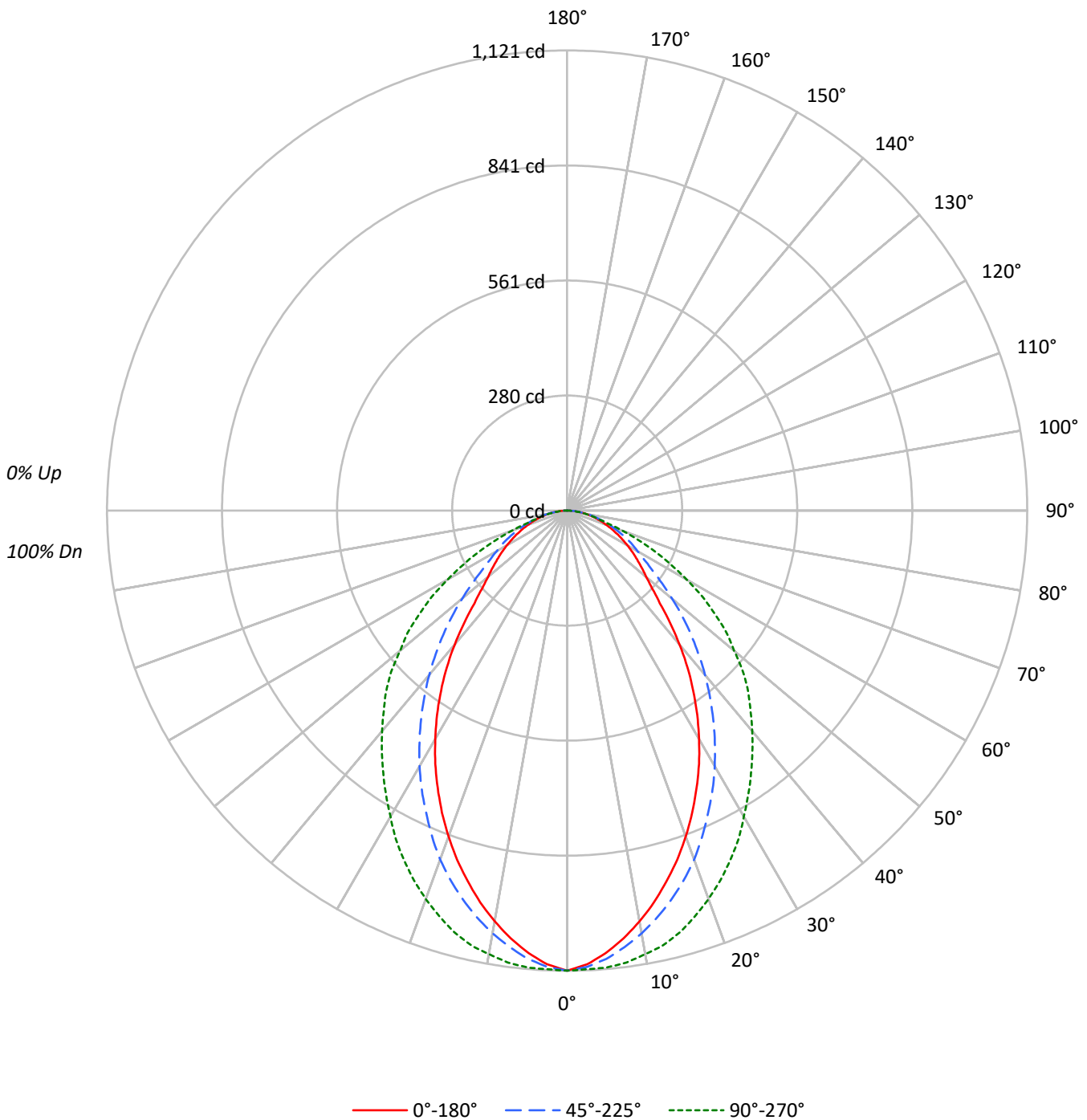
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2040.4 lumens  
Efficiency: N/A  
Efficacy: 65.4 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
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	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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87		
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75		
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65		
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57		
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50		
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45		
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41		
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37		
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34		
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31		

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

	0°	45°	90°
0°	9650	9650	9650
5°	9353	9475	9657
10°	8886	9142	9594
15°	8336	8745	9478
20°	7741	8290	9226
25°	7088	7724	8929
30°	6390	7149	8562
35°	5631	6521	8212
40°	4793	5877	7883
45°	3891	5193	7597
50°	3368	4469	7114
55°	3121	3792	6597
60°	2914	3419	5787
65°	2728	3207	4811
70°	2543	2958	3638
75°	2422	2735	2618
80°	2271	2504	2212
85°	2085	2322	1739

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7597 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.5	5.1
10°-20°	278.1	13.6
20°-30°	379.8	18.6
30°-40°	397.9	19.5
40°-50°	344.4	16.9
50°-60°	258.8	12.7
60°-70°	166.9	8.2
70°-80°	85.6	4.2
80°-90°	25.5	1.3
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°	761.4	37.3
0°-40°	1159.2	56.8
0°-60°	1762.4	86.4
0°-90°	2040.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2040.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1082	1098	1096	1104	1117	101
15°	935	959	981	1026	1063	262
25°	746	774	813	876	940	342
35°	536	566	620	702	781	334
45°	320	352	426	531	624	252
55°	208	215	253	361	439	187
65°	134	136	157	190	236	133
75°	73	81	82	81	79	77
85°	21	25	24	22	18	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1120.7	1120.7	1120.7	1120.7	1120.7
2.5°	1106.6	1120.7	1112.5	1114.9	1118.4
5°	1082.0	1098.4	1096.1	1104.3	1117.2
7.5°	1051.4	1069.0	1072.6	1091.4	1110.2
10°	1016.2	1036.1	1045.5	1073.7	1097.2
12.5°	977.4	998.5	1015.0	1050.2	1084.3
15°	935.1	958.6	980.9	1025.6	1063.2
17.5°	891.6	915.1	944.5	993.8	1036.1
20°	844.7	870.5	904.6	956.3	1006.8
22.5°	796.5	823.5	859.9	916.3	975.1
25°	746.0	774.2	812.9	876.4	939.8
27.5°	695.5	723.7	767.1	834.1	903.4
30°	642.6	672.0	719.0	791.8	861.1
32.5°	589.7	621.4	669.6	747.1	821.2
35°	535.7	566.2	620.3	702.5	781.2
37.5°	481.7	513.4	570.9	659.0	741.3
40°	426.4	459.3	522.8	615.6	701.3
42.5°	371.2	406.5	473.4	570.9	661.4
45°	319.5	352.4	426.4	531.0	623.8
47.5°	280.8	303.1	379.4	492.2	581.5
50°	251.4	263.1	333.6	449.9	531.0
52.5°	229.1	237.3	291.3	404.1	489.9
55°	207.9	215.0	252.6	360.7	439.4
57.5°	189.1	192.7	223.2	318.4	391.2
60°	169.2	172.7	198.5	272.5	336.0
62.5°	151.5	153.9	178.6	229.1	285.5
65°	133.9	136.3	157.4	190.3	236.1
67.5°	117.5	121.0	137.4	155.1	188.0
70°	101.0	108.1	117.5	125.7	144.5
72.5°	86.9	94.0	98.7	101.0	102.2
75°	72.8	81.1	82.2	81.1	78.7
77.5°	58.7	65.8	65.8	63.4	61.1
80°	45.8	51.7	50.5	48.2	44.6
82.5°	34.1	37.6	36.4	34.1	30.5
85°	21.1	24.7	23.5	22.3	17.6
87.5°	10.6	14.1	12.9	11.7	7.0
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	14.31	15.79	14.67	16.11	16.42	18.08	19.57	18.45	19.88	20.19
	3H	15.96	17.29	16.34	17.62	17.98	19.20	20.53	19.58	20.85	21.22
	4H	16.63	17.88	17.03	18.23	18.61	19.49	20.73	19.89	21.08	21.46
	6H	17.15	18.30	17.56	18.66	19.06	19.68	20.83	20.10	21.20	21.59
	8H	17.33	18.42	17.76	18.81	19.21	19.74	20.83	20.16	21.22	21.62
	12H	17.45	18.50	17.88	18.88	19.31	19.76	20.81	20.19	21.19	21.62
4H	2H	15.09	16.34	15.49	16.69	17.07	18.24	19.49	18.64	19.84	20.22
	3H	16.95	17.99	17.36	18.39	18.79	19.55	20.59	19.96	20.99	21.39
	4H	17.76	18.69	18.20	19.11	19.55	19.96	20.89	20.39	21.31	21.75
	6H	18.41	19.22	18.87	19.66	20.12	20.28	21.08	20.74	21.53	21.99
	8H	18.64	19.39	19.10	19.84	20.31	20.37	21.12	20.83	21.57	22.04
	12H	18.81	19.48	19.29	19.96	20.43	20.43	21.10	20.91	21.58	22.06
8H	4H	18.11	18.87	18.58	19.31	19.78	20.09	20.85	20.56	21.29	21.76
	6H	18.90	19.53	19.40	20.02	20.50	20.51	21.13	21.00	21.62	22.10
	8H	19.23	19.78	19.74	20.30	20.78	20.66	21.22	21.17	21.73	22.22
	12H	19.49	19.98	20.00	20.48	21.04	20.78	21.28	21.29	21.77	22.33
12H	4H	18.14	18.81	18.62	19.29	19.77	20.10	20.77	20.58	21.25	21.72
	6H	18.97	19.53	19.48	20.04	20.53	20.53	21.09	21.04	21.60	22.09
	8H	19.35	19.85	19.86	20.34	20.91	20.73	21.22	21.24	21.72	22.28