

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: P1060226

Luminaire Tested: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060226  
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-S1020D830-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

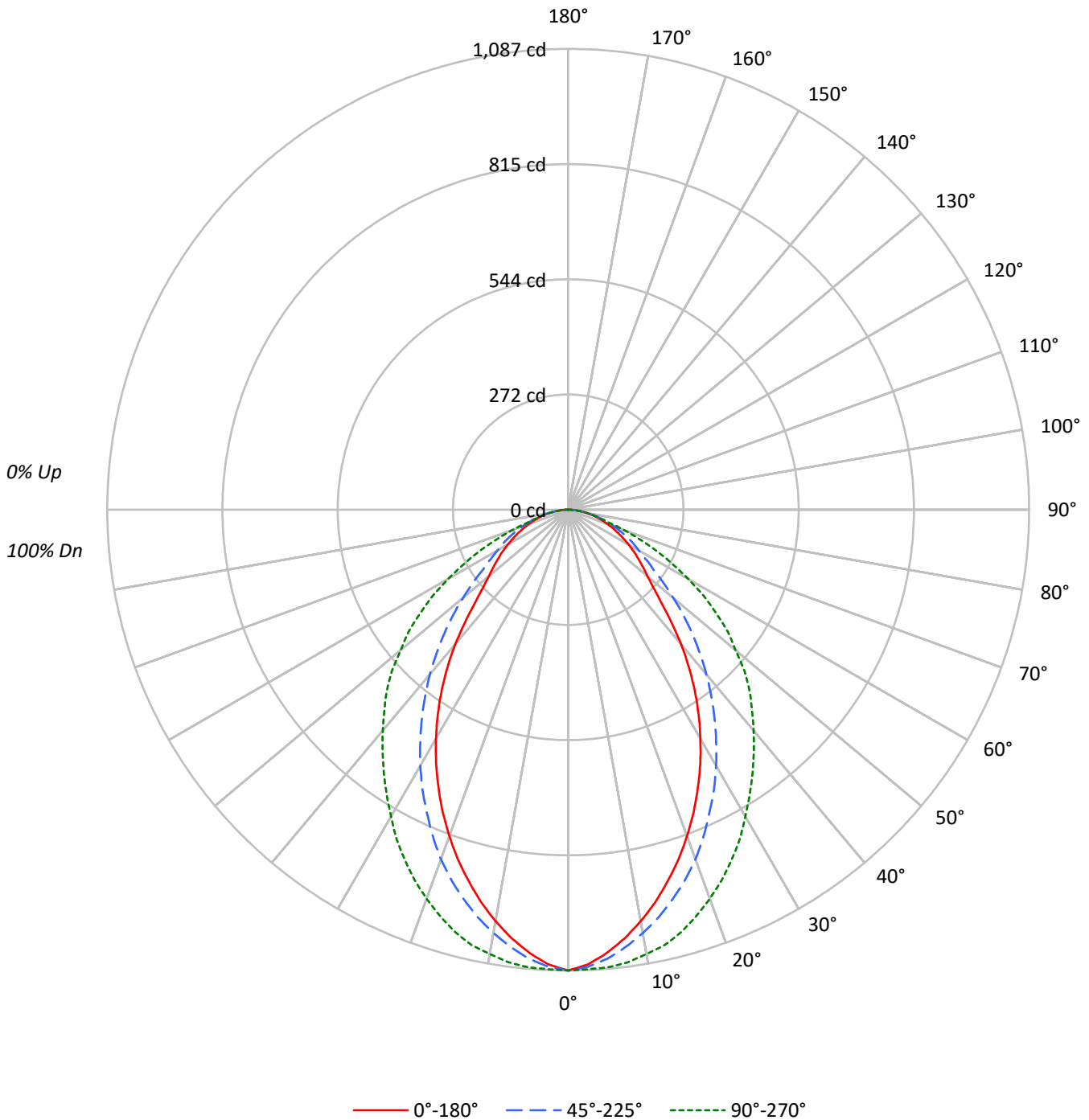
Lumens per Lamp: N/A  
Luminaire Lumens: 1978.9 lumens  
Efficiency: N/A  
Efficacy: 56.5 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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

TEST NUMBER: P1060226

CATALOG NUMBER: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1060226

CATALOG NUMBER: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

**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			
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77					75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67					65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59					57				
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52					50				
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42					41				
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32					31				

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

	0°	45°	90°
0°	9360	9360	9360
5°	9071	9189	9366
10°	8618	8866	9305
15°	8085	8482	9192
20°	7507	8039	8948
25°	6874	7491	8660
30°	6197	6933	8305
35°	5462	6324	7965
40°	4649	5699	7646
45°	3774	5037	7368
50°	3266	4335	6899
55°	3028	3678	6397
60°	2826	3317	5613
65°	2647	3111	4666
70°	2467	2868	3527
75°	2349	2655	2539
80°	2202	2430	2147
85°	2025	2253	1690

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7368 cd/sqm



TEST NUMBER: P1060226

CATALOG NUMBER: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.4	5.1
10°-20°	269.7	13.6
20°-30°	368.3	18.6
30°-40°	385.9	19.5
40°-50°	334.0	16.9
50°-60°	251.0	12.7
60°-70°	161.8	8.2
70°-80°	83.0	4.2
80°-90°	24.8	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°	738.4	37.3
0°-40°	1124.3	56.8
0°-60°	1709.3	86.4
0°-90°	1978.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1978.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1087	1087	1087	1087	1087	
5°	1049	1065	1063	1071	1084	98
15°	907	930	951	995	1031	254
25°	724	751	788	850	912	332
35°	520	549	602	681	758	324
45°	310	342	414	515	605	244
55°	202	208	245	350	426	181
65°	130	132	153	185	229	129
75°	71	79	80	79	76	75
85°	20	24	23	22	17	23
90°	0	0	0	0	0	



TEST NUMBER: P1060226

CATALOG NUMBER: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1087.0	1087.0	1087.0	1087.0	1087.0
2.5°	1073.3	1087.0	1079.0	1081.3	1084.7
5°	1049.4	1065.3	1063.0	1071.0	1083.5
7.5°	1019.7	1036.8	1040.3	1058.5	1076.7
10°	985.6	1004.9	1014.0	1041.4	1064.2
12.5°	948.0	968.5	984.4	1018.6	1051.6
15°	906.9	929.7	951.4	994.7	1031.1
17.5°	864.8	887.6	916.1	963.9	1004.9
20°	819.2	844.3	877.3	927.5	976.4
22.5°	772.5	798.7	834.0	888.7	945.7
25°	723.5	750.8	788.4	850.0	911.5
27.5°	674.5	701.9	744.0	809.0	876.2
30°	623.2	651.7	697.3	767.9	835.2
32.5°	572.0	602.7	649.4	724.6	796.4
35°	519.6	549.2	601.6	681.3	757.7
37.5°	467.1	497.9	553.7	639.2	718.9
40°	413.6	445.5	507.0	597.0	680.2
42.5°	360.0	394.2	459.2	553.7	641.5
45°	309.9	341.8	413.6	515.0	605.0
47.5°	272.3	294.0	368.0	477.4	564.0
50°	243.8	255.2	323.6	436.4	515.0
52.5°	222.2	230.2	282.6	391.9	475.1
55°	201.7	208.5	245.0	349.8	426.1
57.5°	183.4	186.9	216.5	308.8	379.4
60°	164.1	167.5	192.6	264.3	325.9
62.5°	147.0	149.3	173.2	222.2	276.9
65°	129.9	132.2	152.7	184.6	229.0
67.5°	113.9	117.4	133.3	150.4	182.3
70°	98.0	104.8	113.9	121.9	140.1
72.5°	84.3	91.2	95.7	98.0	99.1
75°	70.6	78.6	79.8	78.6	76.3
77.5°	57.0	63.8	63.8	61.5	59.2
80°	44.4	50.1	49.0	46.7	43.3
82.5°	33.0	36.5	35.3	33.0	29.6
85°	20.5	23.9	22.8	21.6	17.1
87.5°	10.3	13.7	12.5	11.4	6.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060226  
 CATALOG NUMBER: S124RDRP-S1020D830-X4F0-XX-UDD-WVL-S

**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	14.20	15.69	14.57	16.00	16.32	17.98	19.46	18.34	19.77	20.09
	3H	15.86	17.19	16.24	17.52	17.88	19.09	20.42	19.47	20.75	21.11
	4H	16.53	17.77	16.93	18.12	18.50	19.38	20.63	19.78	20.97	21.35
	6H	17.04	18.19	17.45	18.56	18.95	19.58	20.73	19.99	21.09	21.49
	8H	17.22	18.32	17.65	18.71	19.11	19.63	20.72	20.06	21.11	21.52
	12H	17.35	18.39	17.78	18.78	19.21	19.66	20.70	20.09	21.09	21.52
4H	2H	14.99	16.23	15.39	16.58	16.96	18.14	19.38	18.54	19.73	20.11
	3H	16.85	17.88	17.26	18.28	18.68	19.45	20.48	19.86	20.88	21.28
	4H	17.66	18.58	18.09	19.00	19.44	19.85	20.78	20.29	21.20	21.64
	6H	18.30	19.11	18.76	19.55	20.01	20.17	20.98	20.63	21.42	21.88
	8H	18.53	19.29	19.00	19.73	20.20	20.26	21.02	20.73	21.46	21.93
	12H	18.70	19.37	19.18	19.85	20.32	20.32	21.00	20.81	21.48	21.95
8H	4H	18.00	18.76	18.47	19.20	19.67	19.99	20.74	20.45	21.19	21.65
	6H	18.80	19.42	19.30	19.91	20.39	20.40	21.02	20.90	21.51	21.99
	8H	19.12	19.68	19.63	20.19	20.68	20.55	21.11	21.07	21.62	22.11
	12H	19.38	19.88	19.89	20.37	20.94	20.67	21.17	21.18	21.66	22.23
12H	4H	18.03	18.71	18.52	19.19	19.66	19.99	20.67	20.48	21.14	21.62
	6H	18.86	19.42	19.37	19.93	20.42	20.42	20.98	20.94	21.49	21.98
	8H	19.25	19.74	19.76	20.23	20.80	20.62	21.12	21.13	21.61	22.18