

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: P1060253

Luminaire Tested: S124RDRP-S1020D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060253  
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-S1020D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

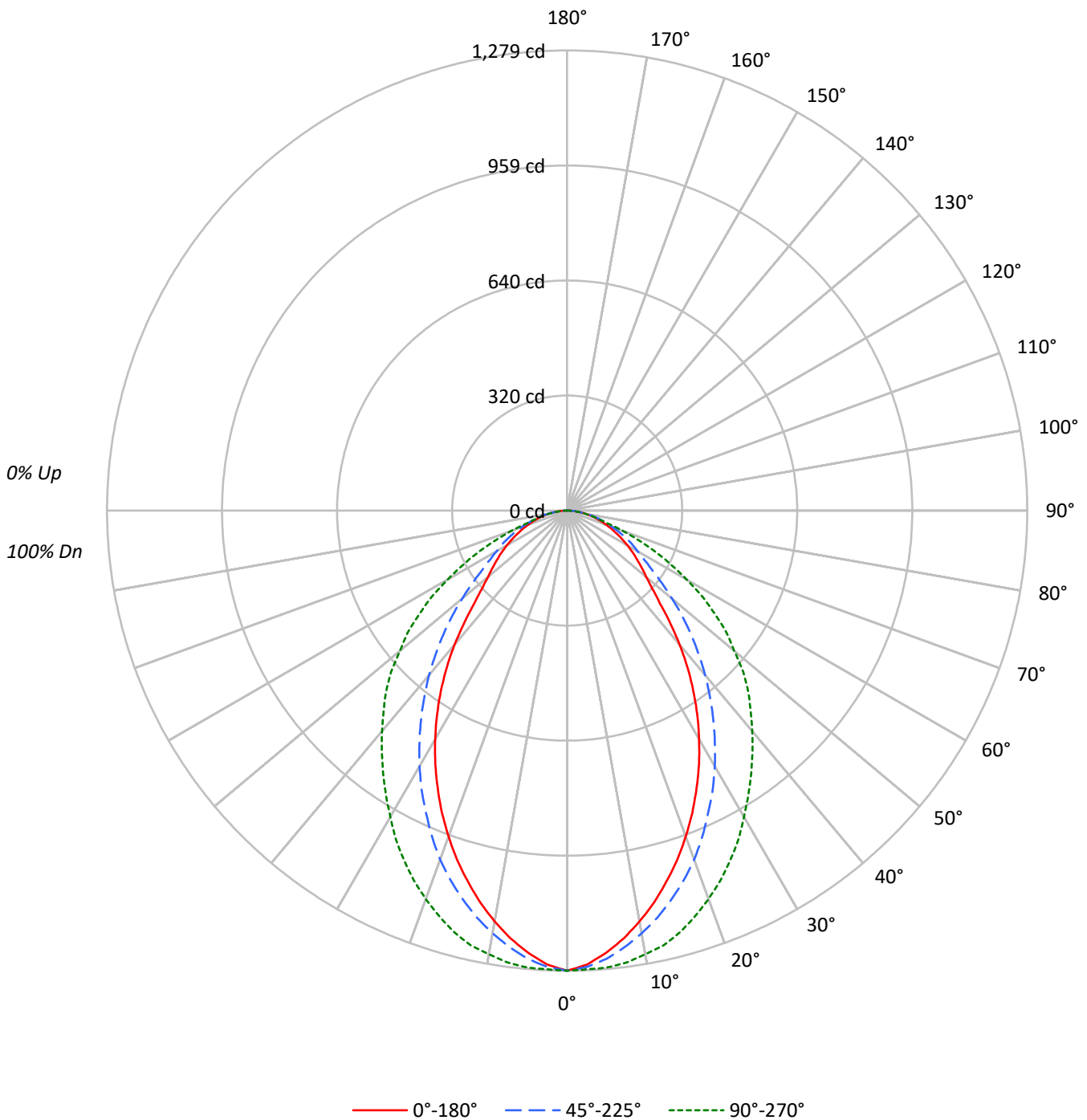
Lumens per Lamp: N/A  
Luminaire Lumens: 2328.4 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

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

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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			
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°	11013	11013	11013
5°	10673	10812	11020
10°	10140	10432	10948
15°	9513	9979	10816
20°	8833	9460	10528
25°	8088	8814	10190
30°	7291	8157	9771
35°	6426	7441	9372
40°	5470	6706	8996
45°	4440	5926	8670
50°	3843	5100	8117
55°	3563	4327	7528
60°	3324	3903	6603
65°	3113	3659	5491
70°	2903	3376	4152
75°	2765	3121	2988
80°	2594	2856	2524
85°	2381	2648	1986

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8670 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.1	5.1
10°-20°	317.4	13.6
20°-30°	433.4	18.6
30°-40°	454.0	19.5
40°-50°	393.0	16.9
50°-60°	295.3	12.7
60°-70°	190.4	8.2
70°-80°	97.6	4.2
80°-90°	29.2	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°	868.8	37.3
0°-40°	1322.9	56.8
0°-60°	2011.2	86.4
0°-90°	2328.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2328.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1279	1279	1279	1279	1279	
5°	1235	1254	1251	1260	1275	116
15°	1067	1094	1119	1170	1213	299
25°	851	884	928	1000	1072	391
35°	611	646	708	802	892	381
45°	365	402	487	606	712	287
55°	237	245	288	412	501	213
65°	153	156	180	217	270	152
75°	83	92	94	92	90	88
85°	24	28	27	26	20	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1278.9	1278.9	1278.9	1278.9	1278.9
2.5°	1262.8	1278.9	1269.5	1272.2	1276.2
5°	1234.7	1253.5	1250.8	1260.2	1274.9
7.5°	1199.8	1219.9	1224.0	1245.4	1266.9
10°	1159.6	1182.4	1193.1	1225.3	1252.1
12.5°	1115.4	1139.5	1158.3	1198.5	1237.4
15°	1067.1	1093.9	1119.4	1170.3	1213.2
17.5°	1017.5	1044.3	1077.8	1134.1	1182.4
20°	963.9	993.4	1032.3	1091.2	1148.9
22.5°	908.9	939.8	981.3	1045.7	1112.7
25°	851.3	883.5	927.7	1000.1	1072.5
27.5°	793.6	825.8	875.4	951.8	1030.9
30°	733.3	766.8	820.4	903.6	982.7
32.5°	673.0	709.2	764.1	852.6	937.1
35°	611.3	646.2	707.8	801.7	891.5
37.5°	549.6	585.8	651.5	752.1	845.9
40°	486.6	524.2	596.6	702.5	800.3
42.5°	423.6	463.8	540.3	651.5	754.8
45°	364.6	402.2	486.6	605.9	711.9
47.5°	320.4	345.9	433.0	561.7	663.6
50°	286.9	300.3	380.7	513.4	605.9
52.5°	261.4	270.8	332.5	461.2	559.0
55°	237.3	245.3	288.2	411.6	501.4
57.5°	215.8	219.9	254.7	363.3	446.4
60°	193.0	197.1	226.6	311.0	383.4
62.5°	172.9	175.6	203.8	261.4	325.8
65°	152.8	155.5	179.6	217.2	269.5
67.5°	134.1	138.1	156.8	177.0	214.5
70°	115.3	123.3	134.1	143.4	164.9
72.5°	99.2	107.2	112.6	115.3	116.6
75°	83.1	92.5	93.8	92.5	89.8
77.5°	67.0	75.1	75.1	72.4	69.7
80°	52.3	59.0	57.6	55.0	50.9
82.5°	38.9	42.9	41.6	38.9	34.9
85°	24.1	28.2	26.8	25.5	20.1
87.5°	12.1	16.1	14.7	13.4	8.0
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	14.77	16.25	15.13	16.57	16.88	18.54	20.02	18.91	20.34	20.65
	3H	16.42	17.75	16.80	18.08	18.44	19.65	20.98	20.03	21.31	21.67
	4H	17.09	18.34	17.49	18.69	19.07	19.94	21.19	20.34	21.54	21.92
	6H	17.61	18.76	18.02	19.12	19.52	20.14	21.29	20.55	21.66	22.05
	8H	17.79	18.88	18.21	19.27	19.67	20.20	21.29	20.62	21.68	22.08
	12H	17.91	18.96	18.34	19.34	19.77	20.22	21.27	20.65	21.65	22.08
4H	2H	15.55	16.80	15.95	17.15	17.52	18.70	19.95	19.10	20.29	20.67
	3H	17.41	18.44	17.82	18.85	19.25	20.01	21.04	20.42	21.45	21.85
	4H	18.22	19.15	18.65	19.57	20.01	20.42	21.35	20.85	21.76	22.20
	6H	18.87	19.67	19.33	20.12	20.58	20.74	21.54	21.19	21.99	22.45
	8H	19.10	19.85	19.56	20.30	20.76	20.83	21.58	21.29	22.03	22.49
	12H	19.27	19.94	19.75	20.42	20.89	20.89	21.56	21.37	22.04	22.51
8H	4H	18.57	19.32	19.03	19.77	20.24	20.55	21.31	21.02	21.75	22.22
	6H	19.36	19.99	19.86	20.48	20.96	20.96	21.59	21.46	22.08	22.56
	8H	19.68	20.24	20.20	20.75	21.24	21.12	21.68	21.63	22.19	22.67
	12H	19.95	20.44	20.46	20.94	21.50	21.24	21.73	21.75	22.23	22.79
12H	4H	18.60	19.27	19.08	19.75	20.22	20.56	21.23	21.04	21.71	22.18
	6H	19.42	19.99	19.94	20.50	20.98	20.99	21.55	21.50	22.06	22.55
	8H	19.81	20.31	20.32	20.80	21.36	21.19	21.68	21.70	22.18	22.74