

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: P1060244

Luminaire Tested: S124RDRP-S1020D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060244  
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-S1020D840-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: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

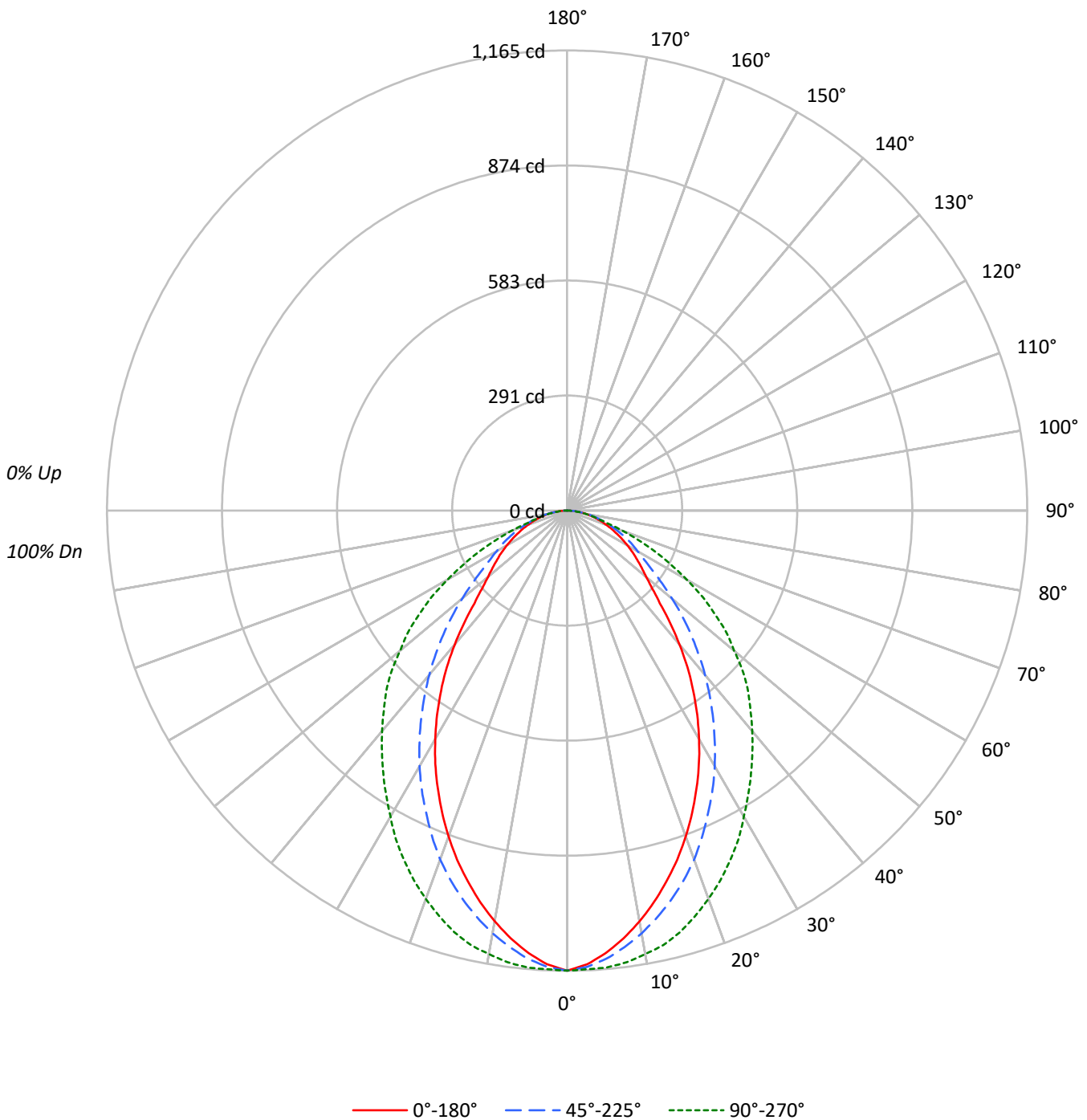
Lumens per Lamp: N/A  
Luminaire Lumens: 2120.3 lumens  
Efficiency: N/A  
Efficacy: 60.6 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

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																		
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	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°	10029	10029	10029
5°	9718	9846	10035
10°	9234	9500	9970
15°	8663	9087	9849
20°	8043	8614	9587
25°	7365	8027	9279
30°	6640	7429	8897
35°	5852	6776	8534
40°	4981	6106	8192
45°	4043	5396	7894
50°	3499	4645	7392
55°	3244	3941	6855
60°	3028	3553	6012
65°	2836	3333	5000
70°	2644	3074	3782
75°	2519	2845	2722
80°	2360	2603	2301
85°	2174	2411	1808

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7894 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.5	5.1
10°-20°	289.0	13.6
20°-30°	394.6	18.6
30°-40°	413.4	19.5
40°-50°	357.9	16.9
50°-60°	268.9	12.7
60°-70°	173.4	8.2
70°-80°	88.9	4.2
80°-90°	26.5	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°	791.2	37.3
0°-40°	1204.6	56.8
0°-60°	1831.4	86.4
0°-90°	2120.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2120.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1165	1165	1165	1165	1165	
5°	1124	1141	1139	1148	1161	105
15°	972	996	1019	1066	1105	272
25°	775	804	845	911	977	356
35°	557	588	645	730	812	347
45°	332	366	443	552	648	262
55°	216	223	262	375	457	194
65°	139	142	164	198	245	138
75°	76	84	86	84	82	80
85°	22	26	24	23	18	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1164.6	1164.6	1164.6	1164.6	1164.6
2.5°	1150.0	1164.6	1156.1	1158.5	1162.2
5°	1124.3	1141.4	1139.0	1147.5	1160.9
7.5°	1092.6	1110.9	1114.6	1134.1	1153.6
10°	1056.0	1076.7	1086.5	1115.8	1140.2
12.5°	1015.7	1037.6	1054.7	1091.4	1126.8
15°	971.7	996.1	1019.3	1065.7	1104.8
17.5°	926.6	951.0	981.5	1032.8	1076.7
20°	877.7	904.6	940.0	993.7	1046.2
22.5°	827.7	855.8	893.6	952.2	1013.2
25°	775.2	804.5	844.8	910.7	976.6
27.5°	722.7	752.0	797.2	866.7	938.8
30°	667.8	698.3	747.1	822.8	894.8
32.5°	612.8	645.8	695.8	776.4	853.3
35°	556.7	588.4	644.6	730.0	811.8
37.5°	500.5	533.5	593.3	684.8	770.3
40°	443.1	477.3	543.2	639.7	728.8
42.5°	385.8	422.4	492.0	593.3	687.3
45°	332.0	366.2	443.1	551.8	648.2
47.5°	291.8	315.0	394.3	511.5	604.3
50°	261.2	273.5	346.7	467.6	551.8
52.5°	238.0	246.6	302.7	419.9	509.1
55°	216.1	223.4	262.5	374.8	456.6
57.5°	196.5	200.2	231.9	330.8	406.5
60°	175.8	179.5	206.3	283.2	349.1
62.5°	157.5	159.9	185.6	238.0	296.6
65°	139.2	141.6	163.6	197.8	245.4
67.5°	122.1	125.7	142.8	161.1	195.3
70°	105.0	112.3	122.1	130.6	150.2
72.5°	90.3	97.7	102.5	105.0	106.2
75°	75.7	84.2	85.5	84.2	81.8
77.5°	61.0	68.4	68.4	65.9	63.5
80°	47.6	53.7	52.5	50.1	46.4
82.5°	35.4	39.1	37.8	35.4	31.7
85°	22.0	25.6	24.4	23.2	18.3
87.5°	11.0	14.6	13.4	12.2	7.3
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	14.44	15.93	14.81	16.24	16.55	18.22	19.70	18.58	20.01	20.33
	3H	16.10	17.43	16.48	17.75	18.12	19.33	20.66	19.71	20.99	21.35
	4H	16.77	18.01	17.17	18.36	18.74	19.62	20.86	20.02	21.21	21.59
	6H	17.28	18.43	17.69	18.80	19.19	19.82	20.97	20.23	21.33	21.73
	8H	17.46	18.56	17.89	18.95	19.35	19.87	20.96	20.30	21.35	21.76
	12H	17.59	18.63	18.02	19.02	19.45	19.90	20.94	20.33	21.33	21.76
4H	2H	15.22	16.47	15.63	16.82	17.20	18.37	19.62	18.77	19.97	20.35
	3H	17.09	18.12	17.50	18.52	18.92	19.69	20.72	20.10	21.12	21.52
	4H	17.90	18.82	18.33	19.24	19.68	20.09	21.02	20.53	21.44	21.88
	6H	18.54	19.35	19.00	19.79	20.25	20.41	21.22	20.87	21.66	22.12
	8H	18.77	19.53	19.24	19.97	20.44	20.50	21.26	20.97	21.70	22.17
	12H	18.94	19.61	19.42	20.09	20.57	20.56	21.24	21.05	21.72	22.19
8H	4H	18.24	19.00	18.71	19.44	19.91	20.23	20.98	20.69	21.43	21.89
	6H	19.04	19.66	19.54	20.15	20.63	20.64	21.26	21.14	21.75	22.23
	8H	19.36	19.92	19.87	20.43	20.92	20.79	21.35	21.31	21.86	22.35
	12H	19.62	20.12	20.13	20.61	21.18	20.91	21.41	21.42	21.90	22.47
12H	4H	18.27	18.95	18.76	19.43	19.90	20.23	20.90	20.71	21.38	21.86
	6H	19.10	19.66	19.61	20.17	20.66	20.66	21.22	21.18	21.73	22.22
	8H	19.49	19.98	20.00	20.47	21.04	20.86	21.36	21.37	21.85	22.42