

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: P1060224

Luminaire Tested: S124RDRP-S1020D830-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060224  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S1020D830-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

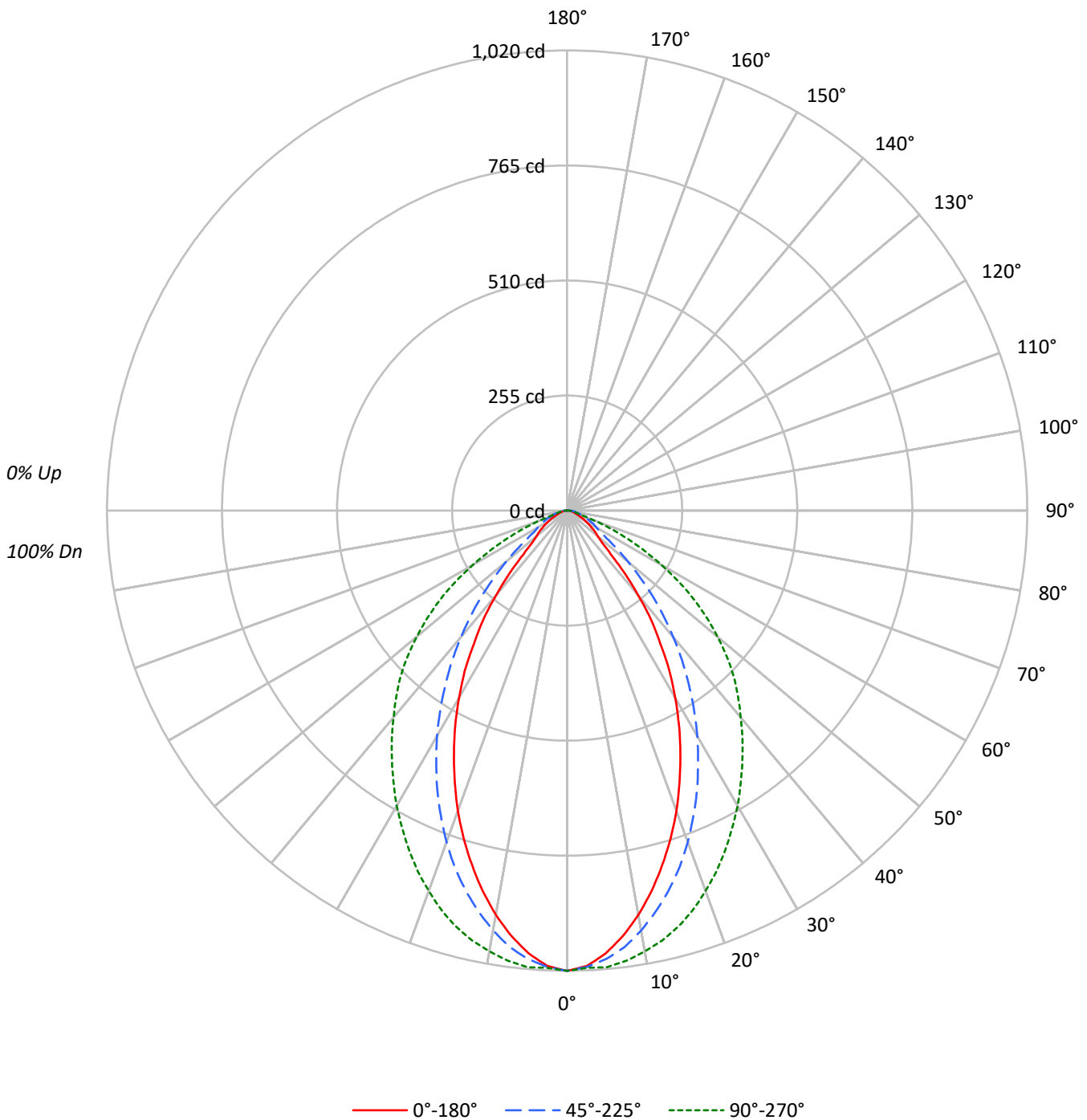
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1444.0 lumens  
Efficiency: N/A  
Efficacy: 41.3 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): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	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	66	75	70	66	73	68	65	63
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	8786	8786	8786
5°	8514	8622	8780
10°	7954	8263	8672
15°	7256	7764	8507
20°	6487	7166	8222
25°	5643	6477	7885
30°	4761	5735	7515
35°	3787	4938	7118
40°	2755	4113	6728
45°	1666	3249	6372
50°	1191	2352	5834
55°	1010	1591	5151
60°	825	1295	4163
65°	650	1161	2997
70°	546	977	1579
75°	492	912	795
80°	511	903	793
85°	672	1354	899

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6372 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	6.5
10°-20°	246.2	17.0
20°-30°	319.2	22.1
30°-40°	307.3	21.3
40°-50°	228.6	15.8
50°-60°	140.6	9.7
60°-70°	69.0	4.8
70°-80°	26.9	1.9
80°-90°	12.3	0.9
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°	659.3	45.7
0°-40°	966.6	66.9
0°-60°	1335.8	92.5
0°-90°	1444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1444.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1020	1020	1020	1020	1020	
5°	985	1000	998	1007	1016	92
15°	814	840	871	923	954	227
25°	594	626	682	767	830	272
35°	360	394	470	587	677	225
45°	137	170	267	412	523	114
55°	67	70	106	242	343	61
65°	32	34	57	91	147	33
75°	15	26	27	25	24	16
85°	7	12	14	14	9	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1020.3	1020.3	1020.3	1020.3	1020.3
2.5°	1010.0	1021.4	1012.3	1013.4	1014.6
5°	984.9	999.7	997.5	1006.6	1015.7
7.5°	950.7	967.8	975.8	994.0	1006.6
10°	909.7	929.1	945.0	974.7	991.8
12.5°	864.1	886.9	909.7	949.6	975.8
15°	813.9	840.2	870.9	923.4	954.2
17.5°	762.6	788.9	828.8	889.2	927.9
20°	707.9	736.4	782.0	849.3	897.2
22.5°	650.9	681.7	731.9	808.2	865.2
25°	593.9	625.8	681.7	767.2	829.9
27.5°	536.9	567.7	628.1	723.9	792.3
30°	478.8	510.7	576.8	677.1	755.8
32.5°	422.9	452.6	523.2	632.7	715.9
35°	360.2	394.4	469.7	587.1	677.1
37.5°	306.7	337.4	418.4	541.5	638.4
40°	245.1	279.3	365.9	497.0	598.5
42.5°	188.1	222.3	315.8	452.6	560.9
45°	136.8	169.9	266.8	411.5	523.2
47.5°	103.7	123.1	218.9	371.6	481.1
50°	88.9	94.6	175.6	328.3	435.5
52.5°	78.7	80.9	136.8	285.0	389.9
55°	67.3	69.5	106.0	241.7	343.1
57.5°	57.0	58.1	85.5	200.6	293.0
60°	47.9	49.0	75.2	160.7	241.7
62.5°	39.9	41.0	67.3	124.3	192.7
65°	31.9	34.2	57.0	91.2	147.1
67.5°	26.2	30.8	47.9	63.8	102.6
70°	21.7	29.6	38.8	44.5	62.7
72.5°	18.2	27.4	33.1	31.9	30.8
75°	14.8	26.2	27.4	25.1	23.9
77.5°	12.5	22.8	22.8	20.5	19.4
80°	10.3	18.2	18.2	18.2	16.0
82.5°	9.1	14.8	16.0	16.0	12.5
85°	6.8	12.5	13.7	13.7	9.1
87.5°	4.6	11.4	12.5	11.4	6.8
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	7.33	8.67	7.70	8.99	9.30	16.50	17.84	16.87	18.16	18.47
	3H	8.44	9.63	8.82	9.96	10.33	17.01	18.20	17.39	18.53	18.89
	4H	8.96	10.07	9.36	10.42	10.80	17.03	18.14	17.43	18.49	18.87
	6H	9.39	10.41	9.81	10.78	11.18	17.04	18.06	17.45	18.43	18.82
	8H	9.58	10.55	10.01	10.94	11.35	17.04	18.01	17.47	18.40	18.81
	12H	9.76	10.69	10.20	11.07	11.50	17.05	17.97	17.48	18.35	18.78
4H	2H	8.48	9.59	8.88	9.94	10.32	16.39	17.50	16.80	17.86	18.24
	3H	9.82	10.73	10.23	11.13	11.54	16.98	17.89	17.40	18.30	18.70
	4H	10.55	11.37	10.99	11.79	12.23	17.04	17.86	17.48	18.27	18.72
	6H	11.16	11.86	11.62	12.31	12.78	17.12	17.82	17.58	18.27	18.73
	8H	11.40	12.06	11.87	12.51	12.98	17.15	17.80	17.62	18.25	18.72
	12H	11.64	12.22	12.12	12.70	13.18	17.19	17.77	17.67	18.25	18.73
8H	4H	11.02	11.68	11.49	12.12	12.60	17.00	17.66	17.47	18.10	18.57
	6H	11.87	12.41	12.37	12.90	13.38	17.13	17.67	17.63	18.16	18.64
	8H	12.27	12.76	12.80	13.27	13.76	17.21	17.69	17.73	18.21	18.70
	12H	12.70	13.12	13.21	13.62	14.19	17.33	17.76	17.85	18.25	18.82
12H	4H	11.07	11.66	11.56	12.14	12.61	16.97	17.55	17.46	18.04	18.51
	6H	12.00	12.49	12.52	13.00	13.49	17.11	17.59	17.63	18.11	18.60
	8H	12.52	12.95	13.04	13.45	14.02	17.24	17.67	17.76	18.17	18.74