

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060698

Luminaire Tested: S124RDR-H1020D950-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060698  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D950-X4F0-XX-UDD-BVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

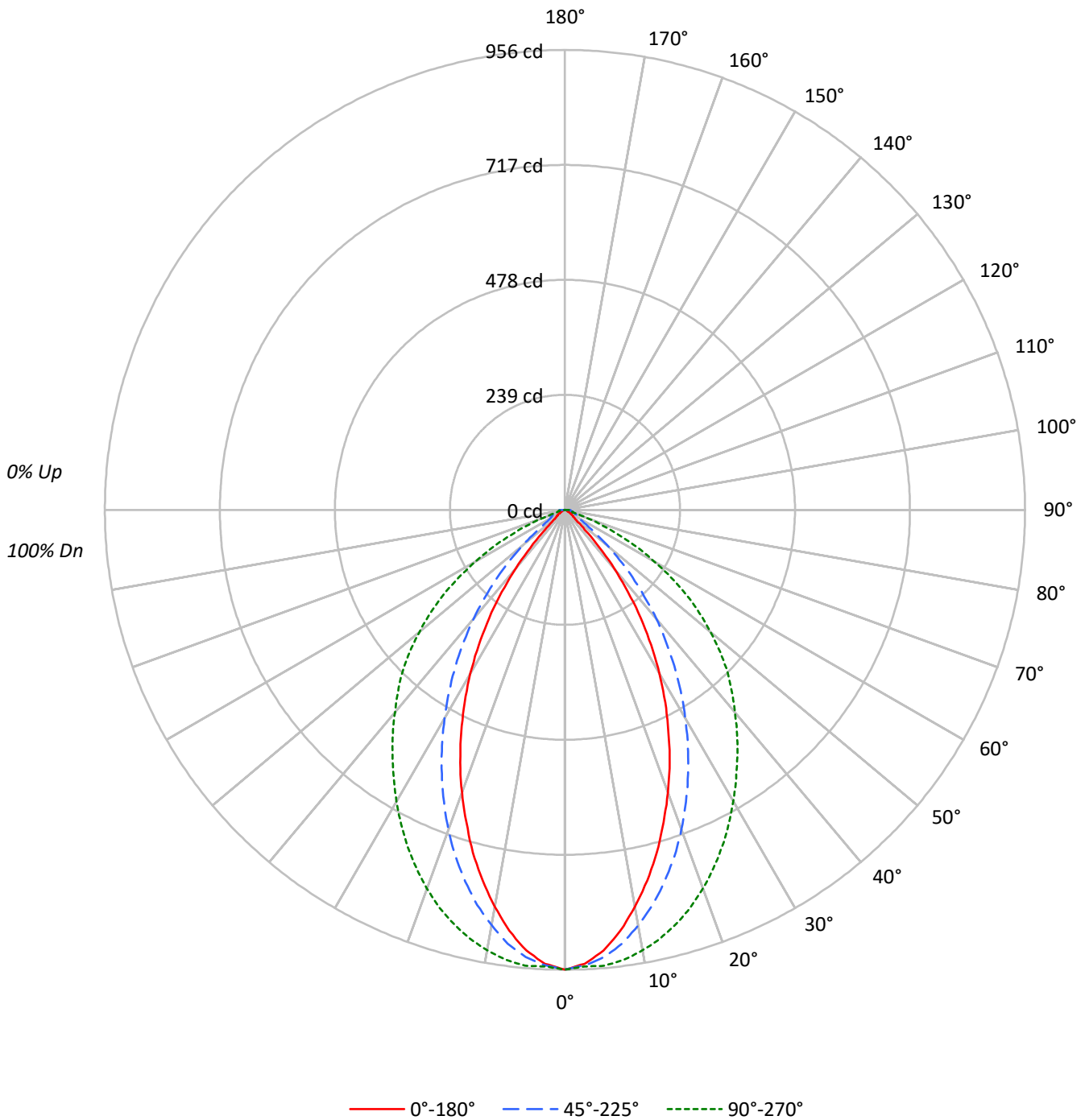
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1204.3 lumens  
Efficiency: N/A  
Efficacy: 38.6 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.96  
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 (Ain): 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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90	90	90	90	90	90	90														
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81	81	81	81	81	81	81														
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72	72	72	72	72	72	72														
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65	65	65	65	65	65	65														
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59	59	59	59	59	59	59														
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54	54	54	54	54	54	54														
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49	49	49	49	49	49	49														
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45	45	45	45	45	45	45														
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42	42	42	42	42	42	42														
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39	39	39	39	39	39	39														

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

	0°	45°	90°
0°	8229	8229	8229
5°	7950	8066	8221
10°	7326	7669	8130
15°	6579	7129	7949
20°	5735	6485	7677
25°	4838	5754	7343
30°	3903	4974	6959
35°	2889	4162	6567
40°	1791	3316	6178
45°	710	2417	5819
50°	316	1518	5289
55°	252	791	4630
60°	174	599	3689
65°	114	595	2537
70°	113	536	1186
75°	150	522	522
80°	223	610	610
85°	445	1215	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5819 cd/sqm

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CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-BVL-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.7	7.3
10°-20°	226.2	18.8
20°-30°	285.6	23.7
30°-40°	262.0	21.8
40°-50°	178.4	14.8
50°-60°	97.2	8.1
60°-70°	42.1	3.5
70°-80°	15.3	1.3
80°-90°	9.9	0.8
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°	599.4	49.8
0°-40°	861.4	71.5
0°-60°	1137.1	94.4
0°-90°	1204.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1204.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	920	932	933	943	951	85
15°	738	764	800	857	892	205
25°	509	545	606	702	773	233
35°	275	315	396	522	625	170
45°	58	98	198	352	478	54
55°	17	18	53	194	308	15
65°	6	8	29	61	124	7
75°	4	15	16	16	16	5
85°	4	10	12	12	9	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	955.6	955.6	955.6	955.6	955.6
2.5°	944.4	955.6	947.7	950.0	950.0
5°	919.7	932.0	933.1	943.2	951.1
7.5°	882.7	900.6	909.6	929.8	943.2
10°	837.8	859.1	877.1	911.8	929.8
12.5°	789.6	814.3	841.2	887.2	912.9
15°	738.0	763.8	799.7	856.9	891.6
17.5°	680.8	712.2	755.9	824.3	867.0
20°	625.8	657.2	707.7	785.1	837.8
22.5°	568.6	601.2	657.2	743.6	806.4
25°	509.2	545.1	605.6	702.1	772.8
27.5°	450.9	489.0	552.9	658.4	736.9
30°	392.5	430.7	500.2	613.5	699.9
32.5°	333.1	372.4	447.5	566.4	661.7
35°	274.8	315.2	395.9	521.5	624.7
37.5°	215.3	258.0	344.3	477.8	587.7
40°	159.3	201.9	295.0	434.0	549.6
42.5°	106.5	149.2	244.5	391.4	513.7
45°	58.3	97.6	198.5	352.2	477.8
47.5°	31.4	53.8	153.7	314.0	437.4
50°	23.6	29.2	113.3	273.7	394.8
52.5°	20.2	22.4	78.5	231.0	352.2
55°	16.8	17.9	52.7	194.0	308.4
57.5°	13.5	14.6	39.3	157.0	261.3
60°	10.1	12.3	34.8	121.1	214.2
62.5°	7.9	10.1	32.5	88.6	169.4
65°	5.6	7.9	29.2	60.6	124.5
67.5°	5.6	9.0	24.7	39.3	84.1
70°	4.5	12.3	21.3	25.8	47.1
72.5°	4.5	13.5	17.9	17.9	17.9
75°	4.5	14.6	15.7	15.7	15.7
77.5°	4.5	13.5	14.6	13.5	13.5
80°	4.5	12.3	12.3	12.3	12.3
82.5°	4.5	11.2	12.3	12.3	10.1
85°	4.5	10.1	12.3	12.3	9.0
87.5°	3.4	10.1	11.2	11.2	6.7
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	0.00	0.00	0.00	0.00	0.27	15.73	17.01	16.10	17.32	17.64
	3H	0.00	0.92	0.17	1.25	1.62	16.11	17.24	16.49	17.57	17.93
	4H	1.02	2.07	1.42	2.42	2.80	16.08	17.14	16.49	17.49	17.87
	6H	2.20	3.16	2.61	3.54	3.93	16.07	17.04	16.49	17.41	17.80
	8H	2.79	3.70	3.22	4.09	4.50	16.07	16.99	16.50	17.38	17.78
	12H	3.46	4.33	3.89	4.72	5.15	16.09	16.96	16.52	17.34	17.77
4H	2H	1.98	3.04	2.39	3.39	3.77	15.54	16.59	15.94	16.94	17.33
	3H	3.56	4.42	3.98	4.83	5.23	15.96	16.82	16.37	17.22	17.63
	4H	4.86	5.63	5.30	6.05	6.49	15.96	16.73	16.40	17.15	17.59
	6H	5.99	6.65	6.45	7.10	7.56	16.00	16.66	16.46	17.11	17.58
	8H	6.50	7.12	6.97	7.56	8.03	16.03	16.64	16.50	17.09	17.56
	12H	7.05	7.59	7.54	8.08	8.55	16.09	16.64	16.58	17.12	17.60
8H	4H	5.94	6.56	6.41	7.01	7.48	15.87	16.49	16.34	16.93	17.41
	6H	7.48	7.99	7.99	8.49	8.97	15.95	16.45	16.45	16.95	17.43
	8H	8.29	8.74	8.81	9.26	9.75	16.03	16.49	16.55	17.00	17.49
	12H	9.12	9.52	9.64	10.02	10.59	16.20	16.60	16.72	17.10	17.67
12H	4H	6.13	6.68	6.62	7.16	7.64	15.83	16.38	16.32	16.86	17.34
	6H	7.84	8.29	8.36	8.81	9.30	15.92	16.38	16.44	16.89	17.38
	8H	8.85	9.25	9.36	9.74	10.32	16.06	16.46	16.57	16.95	17.53