

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: P1060683

Luminaire Tested: S124RDR-H1020D935-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060683  
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: S124RDR-H1020D935-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

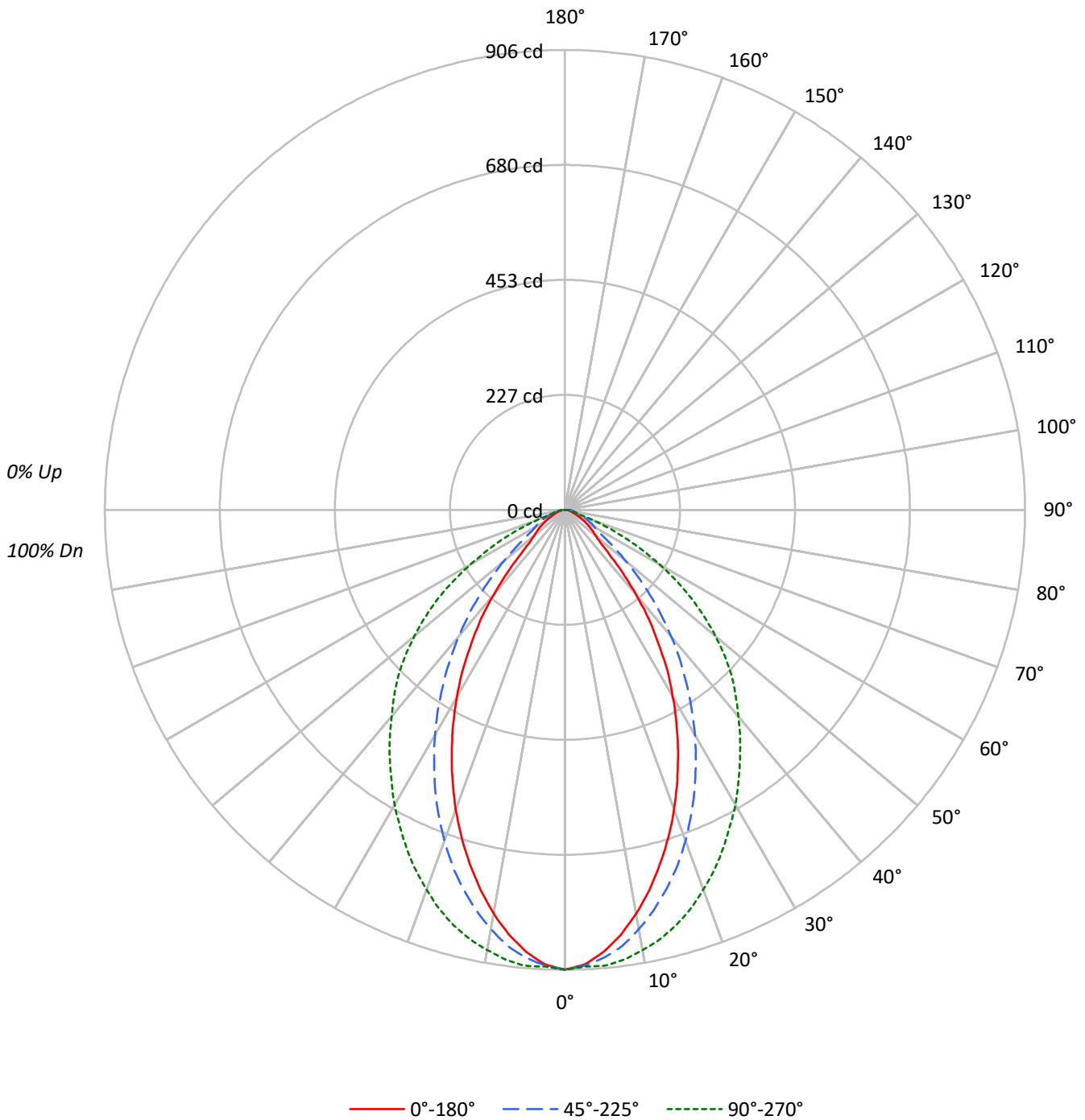
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1281.9 lumens  
Efficiency: N/A  
Efficacy: 41.1 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): 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									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	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°	7799	7799	7799
5°	7558	7654	7794
10°	7062	7335	7698
15°	6442	6893	7551
20°	5759	6361	7298
25°	5009	5750	7000
30°	4226	5092	6671
35°	3362	4383	6319
40°	2446	3651	5972
45°	1478	2884	5657
50°	1057	2087	5179
55°	896	1413	4573
60°	732	1150	3694
65°	577	1031	2659
70°	483	866	1402
75°	439	808	709
80°	451	803	704
85°	603	1196	800

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5657 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.4	6.5
10°-20°	218.5	17.0
20°-30°	283.4	22.1
30°-40°	272.8	21.3
40°-50°	202.9	15.8
50°-60°	124.8	9.7
60°-70°	61.3	4.8
70°-80°	23.9	1.9
80°-90°	10.9	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°	585.3	45.7
0°-40°	858.1	66.9
0°-60°	1185.8	92.5
0°-90°	1281.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1281.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	874	888	886	894	902	81
15°	723	746	773	820	847	202
25°	527	556	605	681	737	241
35°	320	350	417	521	601	200
45°	121	151	237	365	464	101
55°	60	62	94	214	305	54
65°	28	30	51	81	130	29
75°	13	23	24	22	21	14
85°	6	11	12	12	8	6
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	905.7	905.7	905.7	905.7	905.7
2.5°	896.6	906.7	898.6	899.7	900.7
5°	874.4	887.5	885.5	893.6	901.7
7.5°	844.0	859.2	866.3	882.5	893.6
10°	807.6	824.8	838.9	865.3	880.4
12.5°	767.1	787.3	807.6	843.0	866.3
15°	722.6	745.8	773.2	819.7	847.0
17.5°	677.0	700.3	735.7	789.4	823.8
20°	628.4	653.7	694.2	753.9	796.4
22.5°	577.8	605.2	649.7	717.5	768.1
25°	527.2	555.6	605.2	681.1	736.7
27.5°	476.6	504.0	557.6	642.6	703.3
30°	425.0	453.4	512.1	601.1	670.9
32.5°	375.4	401.8	464.5	561.7	635.5
35°	319.8	350.1	416.9	521.2	601.1
37.5°	272.2	299.5	371.4	480.7	566.7
40°	217.6	247.9	324.8	441.2	531.3
42.5°	167.0	197.3	280.3	401.8	497.9
45°	121.4	150.8	236.8	365.3	464.5
47.5°	92.1	109.3	194.3	329.9	427.1
50°	78.9	84.0	155.8	291.5	386.6
52.5°	69.8	71.9	121.4	253.0	346.1
55°	59.7	61.7	94.1	214.5	304.6
57.5°	50.6	51.6	75.9	178.1	260.1
60°	42.5	43.5	66.8	142.7	214.5
62.5°	35.4	36.4	59.7	110.3	171.0
65°	28.3	30.4	50.6	81.0	130.5
67.5°	23.3	27.3	42.5	56.7	91.1
70°	19.2	26.3	34.4	39.5	55.7
72.5°	16.2	24.3	29.3	28.3	27.3
75°	13.2	23.3	24.3	22.3	21.3
77.5°	11.1	20.2	20.2	18.2	17.2
80°	9.1	16.2	16.2	16.2	14.2
82.5°	8.1	13.2	14.2	14.2	11.1
85°	6.1	11.1	12.1	12.1	8.1
87.5°	4.0	10.1	11.1	10.1	6.1
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	6.92	8.26	7.28	8.57	8.89	16.09	17.43	16.45	17.74	18.06
	3H	8.03	9.22	8.41	9.55	9.92	16.60	17.79	16.98	18.12	18.48
	4H	8.55	9.66	8.95	10.01	10.39	16.62	17.73	17.02	18.08	18.46
	6H	8.98	10.00	9.40	10.37	10.77	16.63	17.65	17.04	18.02	18.41
	8H	9.17	10.14	9.60	10.53	10.94	16.63	17.60	17.06	17.99	18.39
	12H	9.36	10.28	9.79	10.66	11.09	16.63	17.56	17.07	17.94	18.37
4H	2H	8.07	9.18	8.47	9.53	9.91	15.98	17.09	16.38	17.44	17.82
	3H	9.41	10.31	9.82	10.72	11.12	16.57	17.48	16.98	17.88	18.29
	4H	10.14	10.95	10.58	11.37	11.82	16.63	17.44	17.06	17.86	18.30
	6H	10.75	11.45	11.21	11.90	12.36	16.71	17.41	17.17	17.85	18.32
	8H	10.99	11.65	11.46	12.10	12.57	16.74	17.39	17.20	17.84	18.31
	12H	11.23	11.81	11.72	12.29	12.77	16.78	17.36	17.26	17.84	18.31
8H	4H	10.61	11.26	11.08	11.71	12.18	16.59	17.24	17.06	17.69	18.16
	6H	11.46	11.99	11.96	12.49	12.97	16.72	17.25	17.22	17.75	18.23
	8H	11.86	12.35	12.39	12.86	13.35	16.80	17.28	17.32	17.80	18.29
	12H	12.29	12.72	12.80	13.21	13.78	16.92	17.35	17.43	17.84	18.41
12H	4H	10.66	11.24	11.15	11.73	12.20	16.56	17.14	17.05	17.62	18.10
	6H	11.59	12.07	12.11	12.59	13.08	16.70	17.18	17.22	17.70	18.19
	8H	12.11	12.54	12.63	13.04	13.61	16.83	17.26	17.34	17.75	18.32