

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: P1060846

Luminaire Tested: S124RDR-H350D935-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060846  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D935-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

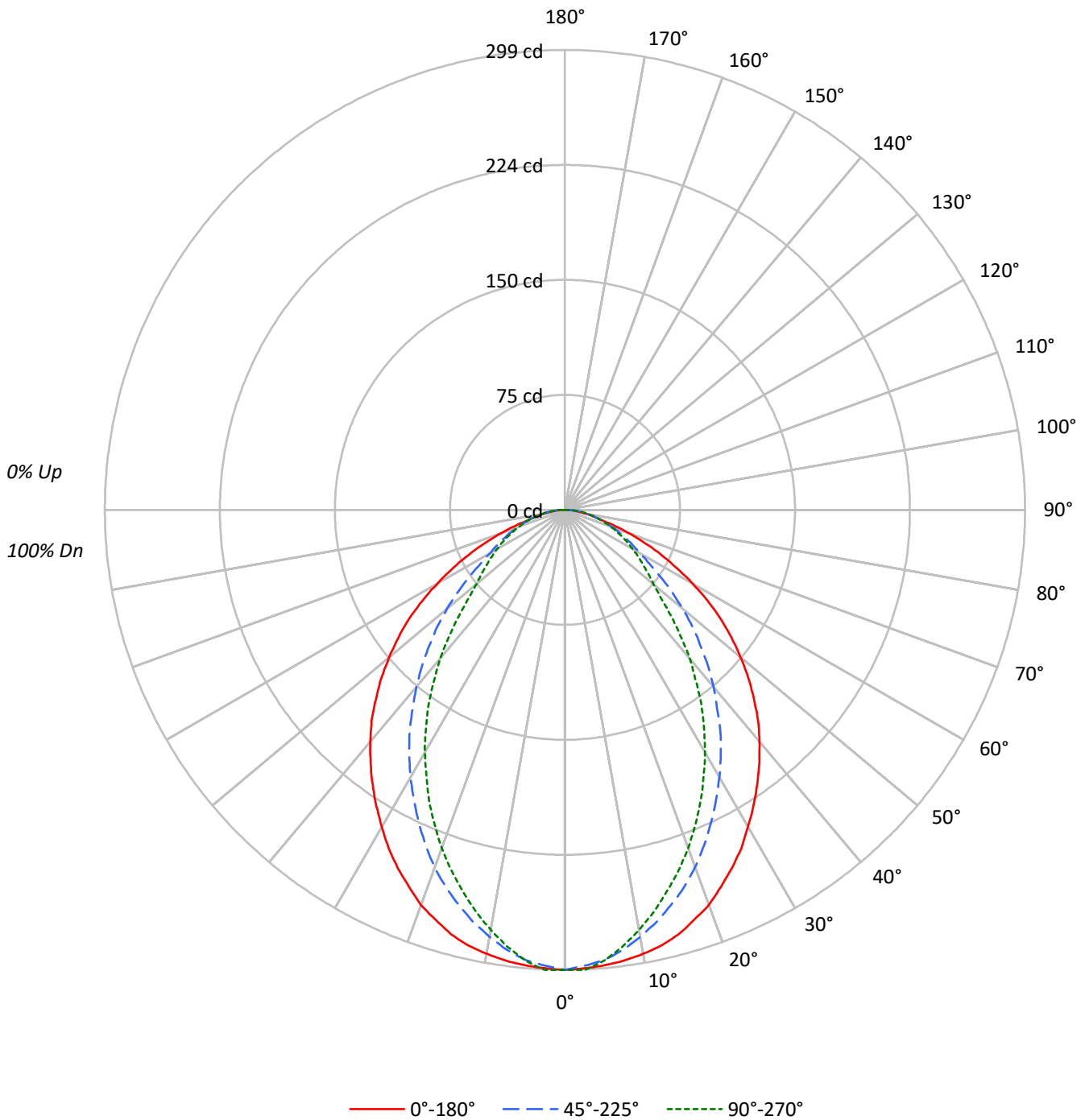
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 576.7 lumens  
Efficiency: N/A  
Efficacy: 49.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	
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	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	107	104	100	97	99	97	94	96	93	91	92	90	88	86				
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74				
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64				
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33				
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30				

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

	0°	45°	90°
0°	2576	2576	2576
5°	2570	2540	2543
10°	2563	2465	2425
15°	2547	2372	2288
20°	2505	2267	2145
25°	2441	2134	1984
30°	2366	1996	1811
35°	2291	1851	1625
40°	2212	1687	1419
45°	2114	1515	1186
50°	1996	1337	1003
55°	1857	1135	929
60°	1646	963	878
65°	1404	888	831
70°	1098	823	788
75°	749	759	759
80°	645	714	734
85°	553	692	761

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2114 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.8	4.8
10°-20°	75.6	13.1
20°-30°	104.9	18.2
30°-40°	112.5	19.5
40°-50°	99.6	17.3
50°-60°	75.1	13.0
60°-70°	48.6	8.4
70°-80°	24.9	4.3
80°-90°	7.6	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°	208.3	36.1
0°-40°	320.8	55.6
0°-60°	495.5	85.9
0°-90°	576.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	576.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	299	299	299	299	299	
5°	297	298	294	294	294	28
15°	286	279	266	259	257	80
25°	257	243	225	213	209	118
35°	218	198	176	160	155	136
45°	174	151	124	105	97	134
55°	124	103	76	64	62	110
65°	69	56	44	41	41	68
75°	22	24	23	23	23	27
85°	6	6	7	8	8	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	299.1	299.1	299.1	299.1	299.1
2.5°	298.4	299.4	296.6	298.7	299.4
5°	297.3	297.7	293.8	294.2	294.2
7.5°	295.6	294.9	288.6	286.8	286.4
10°	293.1	291.0	281.9	278.4	277.3
12.5°	290.0	286.1	274.5	269.6	267.5
15°	285.7	279.4	266.1	259.4	256.6
17.5°	279.4	271.3	257.3	248.8	245.7
20°	273.4	262.5	247.4	236.9	234.1
22.5°	265.0	253.4	236.2	224.9	221.4
25°	256.9	243.2	224.6	212.6	208.8
27.5°	248.1	232.7	212.6	200.0	195.1
30°	237.9	221.4	200.7	187.3	182.1
32.5°	228.1	210.5	188.4	173.6	168.0
35°	217.9	198.2	176.1	160.3	154.6
37.5°	207.4	186.6	162.4	146.9	139.5
40°	196.8	175.0	150.1	132.5	126.2
42.5°	185.9	163.1	137.4	119.1	111.1
45°	173.6	151.1	124.4	105.1	97.4
47.5°	161.7	139.5	112.5	91.4	84.4
50°	149.0	127.2	99.8	79.4	74.9
52.5°	136.4	114.6	87.5	70.3	68.2
55°	123.7	103.0	75.6	63.6	61.9
57.5°	109.7	91.0	65.0	57.6	56.2
60°	95.6	78.0	55.9	52.0	51.0
62.5°	81.9	66.8	49.6	46.4	45.7
65°	68.9	55.5	43.6	41.1	40.8
67.5°	56.2	45.7	38.0	36.6	35.8
70°	43.6	36.6	32.7	32.0	31.3
72.5°	32.3	29.5	27.8	27.4	27.1
75°	22.5	23.5	22.8	22.8	22.8
77.5°	17.9	18.3	18.6	19.0	18.6
80°	13.0	14.1	14.4	15.1	14.8
82.5°	9.1	9.8	10.9	11.2	11.6
85°	5.6	6.0	7.0	7.7	7.7
87.5°	2.5	2.8	3.5	4.2	4.6
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	13.73	15.22	14.09	15.54	15.85	10.29	11.78	10.65	12.10	12.41
	3H	14.93	16.27	15.31	16.60	16.96	11.98	13.33	12.36	13.66	14.02
	4H	15.24	16.50	15.64	16.85	17.22	12.66	13.92	13.06	14.27	14.65
	6H	15.44	16.60	15.85	16.97	17.36	13.21	14.37	13.62	14.74	15.13
	8H	15.50	16.60	15.92	16.99	17.40	13.43	14.54	13.86	14.93	15.33
	12H	15.53	16.59	15.96	16.97	17.40	13.60	14.66	14.03	15.04	15.47
4H	2H	13.87	15.13	14.27	15.48	15.85	10.95	12.21	11.35	12.56	12.94
	3H	15.27	16.32	15.68	16.72	17.12	12.86	13.90	13.27	14.31	14.71
	4H	15.70	16.64	16.13	17.05	17.49	13.66	14.60	14.09	15.02	15.46
	6H	16.02	16.84	16.48	17.28	17.74	14.35	15.17	14.81	15.61	16.07
	8H	16.12	16.88	16.58	17.33	17.79	14.62	15.39	15.09	15.83	16.30
	12H	16.19	16.87	16.67	17.35	17.82	14.85	15.53	15.33	16.01	16.48
8H	4H	15.82	16.59	16.29	17.03	17.50	13.98	14.74	14.44	15.19	15.65
	6H	16.24	16.88	16.74	17.37	17.85	14.81	15.44	15.30	15.93	16.41
	8H	16.40	16.97	16.92	17.48	17.97	15.17	15.74	15.68	16.25	16.74
	12H	16.53	17.03	17.04	17.52	18.09	15.50	16.00	16.01	16.50	17.06
12H	4H	15.83	16.51	16.31	16.99	17.46	14.01	14.69	14.49	15.17	15.64
	6H	16.27	16.84	16.78	17.35	17.84	14.87	15.43	15.38	15.94	16.43
	8H	16.48	16.98	16.99	17.47	18.04	15.30	15.80	15.81	16.29	16.86