

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: P1060851

Luminaire Tested: S124RDR-H350D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060851  
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-H350D940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

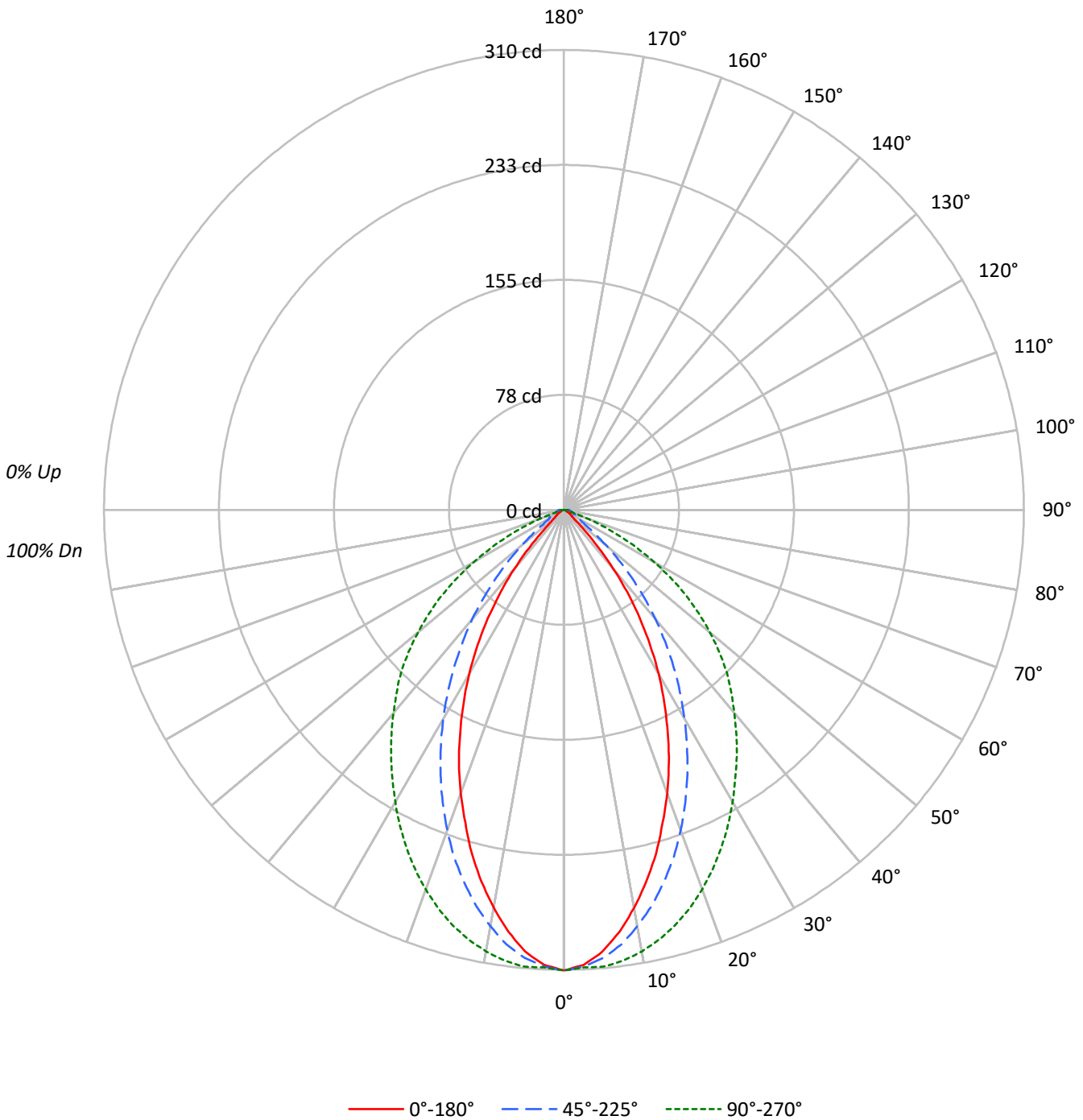
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 391.4 lumens  
Efficiency: N/A  
Efficacy: 33.5 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39

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

	0°	45°	90°
0°	2674	2674	2674
5°	2584	2621	2672
10°	2381	2492	2642
15°	2138	2317	2584
20°	1864	2108	2495
25°	1572	1870	2386
30°	1269	1617	2261
35°	939	1353	2134
40°	582	1078	2008
45°	231	785	1891
50°	103	493	1719
55°	83	257	1504
60°	57	195	1199
65°	37	194	825
70°	38	174	385
75°	50	170	170
80°	74	198	198
85°	148	395	287

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1891 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.5	7.3
10°-20°	73.5	18.8
20°-30°	92.8	23.7
30°-40°	85.1	21.8
40°-50°	58.0	14.8
50°-60°	31.6	8.1
60°-70°	13.7	3.5
70°-80°	5.0	1.3
80°-90°	3.2	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°	194.8	49.8
0°-40°	280.0	71.5
0°-60°	369.5	94.4
0°-90°	391.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	391.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	310	310	310	310	310	
5°	299	303	303	306	309	28
15°	240	248	260	278	290	67
25°	166	177	197	228	251	76
35°	89	102	129	170	203	55
45°	19	32	64	114	155	18
55°	6	6	17	63	100	5
65°	2	3	10	20	40	2
75°	2	5	5	5	5	2
85°	2	3	4	4	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	310.5	310.5	310.5	310.5	310.5
2.5°	306.9	310.5	308.0	308.7	308.7
5°	298.9	302.9	303.2	306.5	309.1
7.5°	286.8	292.7	295.6	302.2	306.5
10°	272.3	279.2	285.0	296.3	302.2
12.5°	256.6	264.6	273.4	288.3	296.7
15°	239.8	248.2	259.9	278.5	289.8
17.5°	221.2	231.4	245.7	267.9	281.7
20°	203.4	213.6	230.0	255.1	272.3
22.5°	184.8	195.4	213.6	241.6	262.1
25°	165.5	177.1	196.8	228.2	251.1
27.5°	146.5	158.9	179.7	213.9	239.5
30°	127.6	140.0	162.6	199.4	227.4
32.5°	108.2	121.0	145.4	184.1	215.0
35°	89.3	102.4	128.7	169.5	203.0
37.5°	70.0	83.8	111.9	155.3	191.0
40°	51.8	65.6	95.9	141.1	178.6
42.5°	34.6	48.5	79.5	127.2	166.9
45°	19.0	31.7	64.5	114.4	155.3
47.5°	10.2	17.5	49.9	102.1	142.1
50°	7.7	9.5	36.8	88.9	128.3
52.5°	6.6	7.3	25.5	75.1	114.4
55°	5.5	5.8	17.1	63.1	100.2
57.5°	4.4	4.7	12.8	51.0	84.9
60°	3.3	4.0	11.3	39.4	69.6
62.5°	2.6	3.3	10.6	28.8	55.0
65°	1.8	2.6	9.5	19.7	40.5
67.5°	1.8	2.9	8.0	12.8	27.3
70°	1.5	4.0	6.9	8.4	15.3
72.5°	1.5	4.4	5.8	5.8	5.8
75°	1.5	4.7	5.1	5.1	5.1
77.5°	1.5	4.4	4.7	4.4	4.4
80°	1.5	4.0	4.0	4.0	4.0
82.5°	1.5	3.6	4.0	4.0	3.3
85°	1.5	3.3	4.0	4.0	2.9
87.5°	1.1	3.3	3.6	3.6	2.2
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	0.00	11.82	13.10	12.19	13.41	13.73
	3H	0.00	0.00	0.00	0.00	0.00	12.20	13.33	12.58	13.66	14.03
	4H	0.00	0.00	0.00	0.00	0.00	12.18	13.23	12.58	13.58	13.97
	6H	0.00	0.00	0.00	0.00	0.05	12.17	13.13	12.58	13.50	13.90
	8H	0.00	0.00	0.00	0.22	0.63	12.17	13.08	12.60	13.47	13.88
	12H	0.00	0.48	0.04	0.86	1.29	12.18	13.05	12.61	13.44	13.87
4H	2H	0.00	0.00	0.00	0.00	0.00	11.63	12.69	12.04	13.04	13.42
	3H	0.00	0.51	0.06	0.91	1.32	12.05	12.91	12.47	13.32	13.72
	4H	0.94	1.71	1.38	2.13	2.57	12.05	12.82	12.49	13.24	13.68
	6H	2.09	2.75	2.55	3.20	3.66	12.09	12.76	12.56	13.20	13.67
	8H	2.60	3.22	3.07	3.67	4.14	12.12	12.74	12.59	13.19	13.66
	12H	3.17	3.71	3.65	4.20	4.67	12.19	12.73	12.67	13.21	13.69
8H	4H	2.02	2.64	2.49	3.09	3.56	11.96	12.58	12.43	13.03	13.50
	6H	3.58	4.08	4.08	4.58	5.06	12.04	12.55	12.54	13.04	13.53
	8H	4.38	4.83	4.90	5.35	5.84	12.12	12.58	12.65	13.10	13.59
	12H	5.23	5.63	5.74	6.12	6.70	12.29	12.70	12.81	13.19	13.76
12H	4H	2.21	2.76	2.70	3.24	3.72	11.93	12.47	12.41	12.95	13.43
	6H	3.93	4.38	4.45	4.90	5.39	12.01	12.47	12.54	12.99	13.48
	8H	4.94	5.34	5.45	5.83	6.41	12.15	12.55	12.67	13.05	13.62