

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: P1060833

Luminaire Tested: S124RDR-H350D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060833  
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-H350D930-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

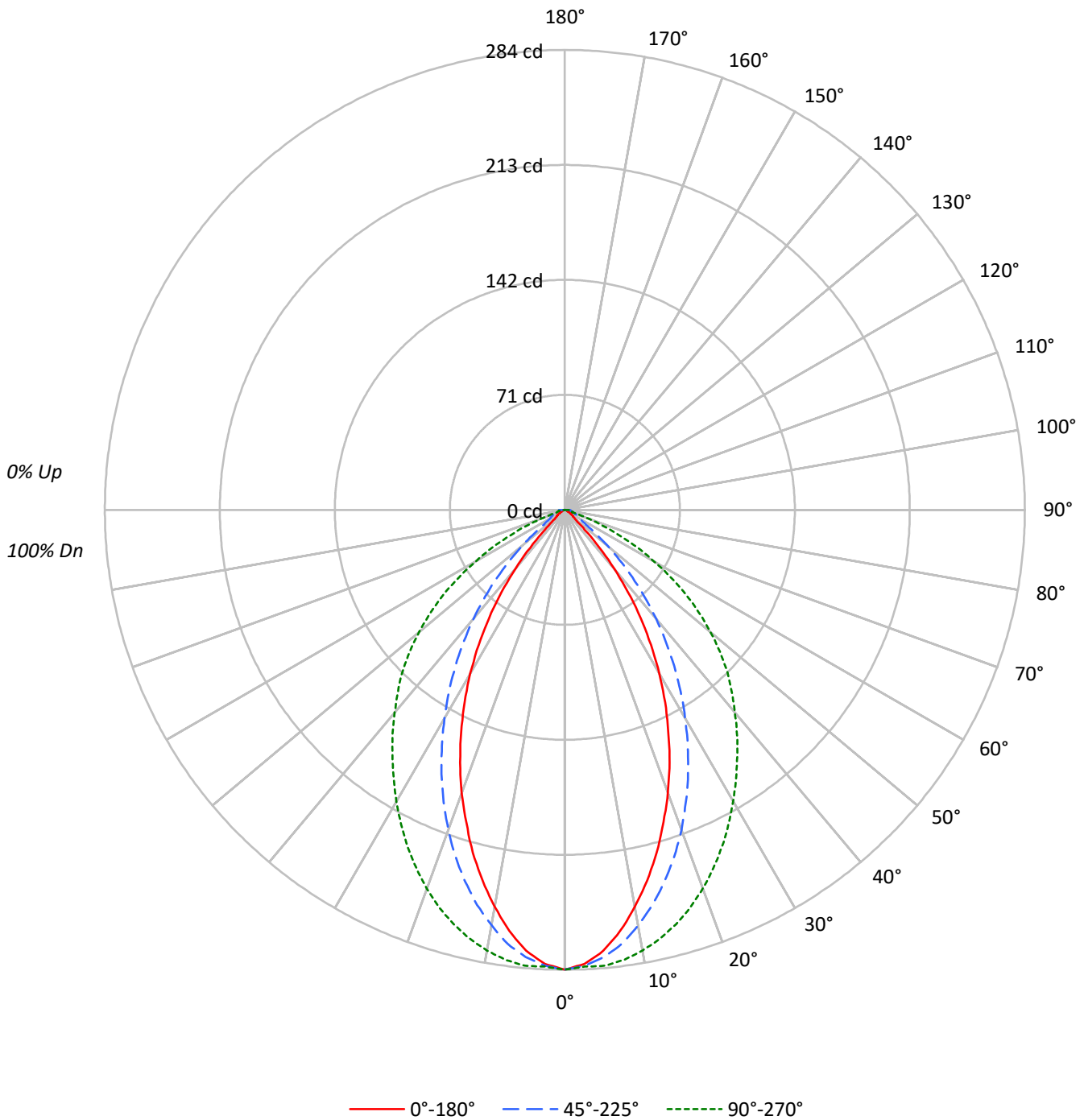
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 357.8 lumens  
Efficiency: N/A  
Efficacy: 30.6 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									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	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°	2445	2445	2445
5°	2362	2397	2443
10°	2176	2279	2416
15°	1955	2118	2362
20°	1704	1927	2281
25°	1438	1710	2182
30°	1159	1478	2067
35°	858	1236	1951
40°	532	985	1836
45°	211	719	1729
50°	94	451	1571
55°	75	236	1375
60°	52	177	1095
65°	35	177	754
70°	33	159	352
75°	43	156	156
80°	64	183	183
85°	128	366	267

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1729 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.0	7.3
10°-20°	67.2	18.8
20°-30°	84.9	23.7
30°-40°	77.8	21.8
40°-50°	53.0	14.8
50°-60°	28.9	8.1
60°-70°	12.5	3.5
70°-80°	4.6	1.3
80°-90°	2.9	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°	178.1	49.8
0°-40°	256.0	71.5
0°-60°	337.9	94.4
0°-90°	357.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	357.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	284	284	284	284	284	
5°	273	277	277	280	283	25
15°	219	227	238	255	265	61
25°	151	162	180	209	230	69
35°	82	94	118	155	186	50
45°	17	29	59	105	142	16
55°	5	5	16	58	92	4
65°	2	2	9	18	37	2
75°	1	4	5	5	5	1
85°	1	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°	283.9	283.9	283.9	283.9	283.9
2.5°	280.6	283.9	281.6	282.3	282.3
5°	273.3	276.9	277.3	280.3	282.6
7.5°	262.3	267.6	270.3	276.3	280.3
10°	248.9	255.3	260.6	270.9	276.3
12.5°	234.6	241.9	249.9	263.6	271.3
15°	219.3	226.9	237.6	254.6	264.9
17.5°	202.3	211.6	224.6	244.9	257.6
20°	186.0	195.3	210.3	233.3	248.9
22.5°	169.0	178.6	195.3	220.9	239.6
25°	151.3	162.0	180.0	208.6	229.6
27.5°	134.0	145.3	164.3	195.6	218.9
30°	116.6	128.0	148.6	182.3	207.9
32.5°	99.0	110.6	133.0	168.3	196.6
35°	81.6	93.6	117.6	155.0	185.6
37.5°	64.0	76.6	102.3	142.0	174.6
40°	47.3	60.0	87.6	129.0	163.3
42.5°	31.7	44.3	72.6	116.3	152.6
45°	17.3	29.0	59.0	104.6	142.0
47.5°	9.3	16.0	45.7	93.3	130.0
50°	7.0	8.7	33.7	81.3	117.3
52.5°	6.0	6.7	23.3	68.6	104.6
55°	5.0	5.3	15.7	57.7	91.6
57.5°	4.0	4.3	11.7	46.7	77.6
60°	3.0	3.7	10.3	36.0	63.6
62.5°	2.3	3.0	9.7	26.3	50.3
65°	1.7	2.3	8.7	18.0	37.0
67.5°	1.7	2.7	7.3	11.7	25.0
70°	1.3	3.7	6.3	7.7	14.0
72.5°	1.3	4.0	5.3	5.3	5.3
75°	1.3	4.3	4.7	4.7	4.7
77.5°	1.3	4.0	4.3	4.0	4.0
80°	1.3	3.7	3.7	3.7	3.7
82.5°	1.3	3.3	3.7	3.7	3.0
85°	1.3	3.0	3.7	3.7	2.7
87.5°	1.0	3.0	3.3	3.3	2.0
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	11.52	12.80	11.88	13.11	13.42
	3H	0.00	0.00	0.00	0.00	0.00	11.90	13.03	12.28	13.36	13.72
	4H	0.00	0.00	0.00	0.00	0.00	11.87	12.93	12.28	13.28	13.66
	6H	0.00	0.00	0.00	0.00	0.00	11.86	12.83	12.28	13.20	13.59
	8H	0.00	0.00	0.00	0.00	0.22	11.86	12.78	12.29	13.17	13.57
	12H	0.00	0.04	0.00	0.42	0.85	11.88	12.75	12.31	13.13	13.56
4H	2H	0.00	0.00	0.00	0.00	0.00	11.33	12.38	11.73	12.73	13.12
	3H	0.00	0.21	0.00	0.62	1.02	11.75	12.61	12.16	13.01	13.42
	4H	0.63	1.39	1.06	1.81	2.26	11.75	12.52	12.18	12.94	13.38
	6H	1.75	2.42	2.22	2.86	3.33	11.79	12.45	12.25	12.90	13.37
	8H	2.25	2.87	2.72	3.32	3.79	11.82	12.44	12.29	12.88	13.36
	12H	2.79	3.34	3.28	3.82	4.29	11.88	12.43	12.37	12.91	13.39
8H	4H	1.71	2.33	2.18	2.78	3.25	11.66	12.28	12.13	12.72	13.20
	6H	3.26	3.77	3.77	4.27	4.75	11.74	12.24	12.24	12.74	13.22
	8H	4.06	4.52	4.58	5.03	5.52	11.82	12.28	12.35	12.79	13.29
	12H	4.88	5.28	5.40	5.78	6.35	12.00	12.40	12.51	12.89	13.47
12H	4H	1.91	2.45	2.39	2.94	3.41	11.62	12.17	12.11	12.65	13.13
	6H	3.63	4.08	4.15	4.60	5.09	11.71	12.17	12.24	12.68	13.18
	8H	4.63	5.03	5.14	5.53	6.10	11.85	12.25	12.37	12.75	13.32