

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: P1060821

Luminaire Tested: S124RDR-H350D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060821  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D850-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

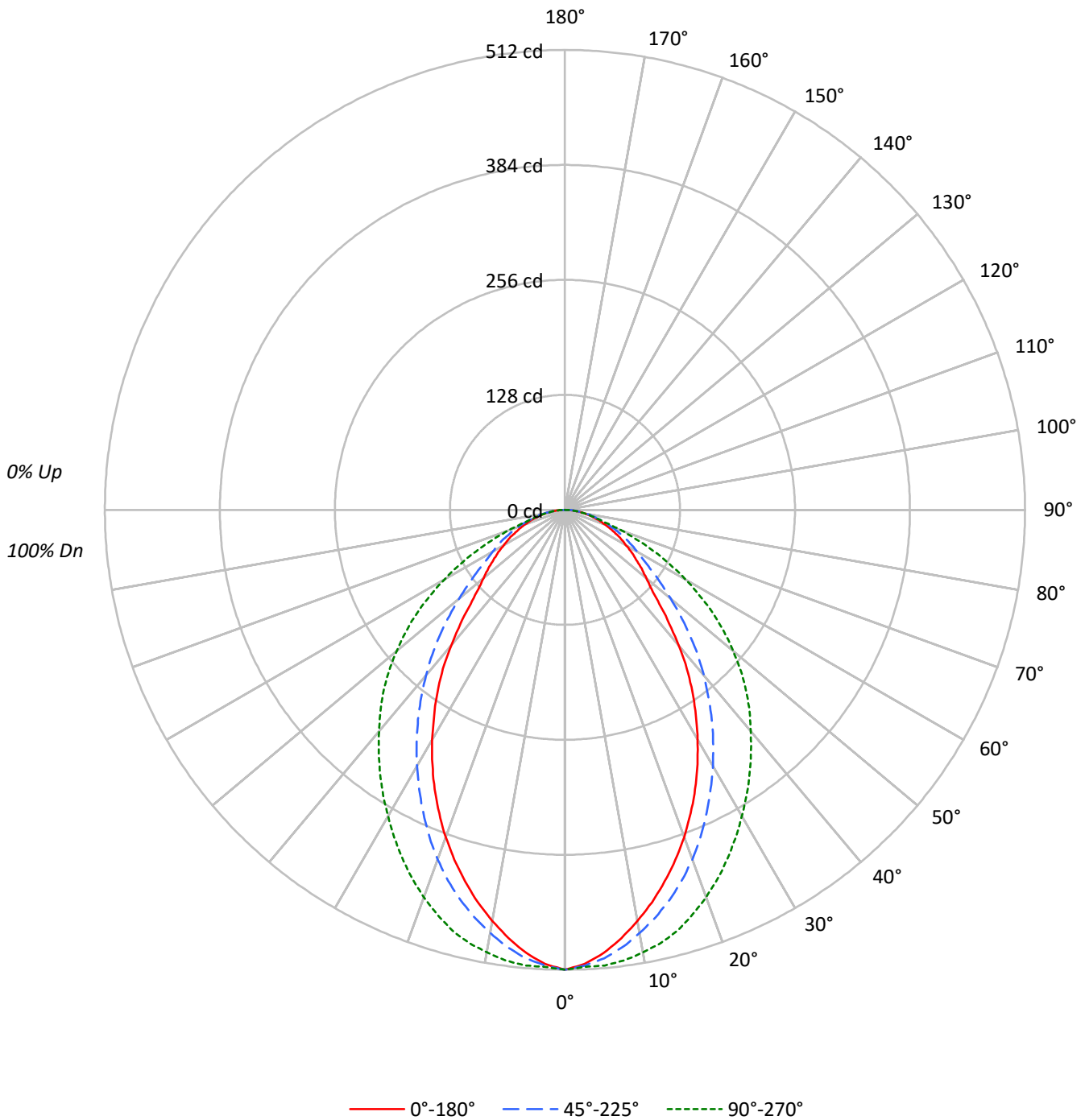
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 939.3 lumens  
Efficiency: N/A  
Efficacy: 80.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75																												
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65																												
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57																												
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50																												
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																												
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																												
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																												
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33																												
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31																												

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

	0°	45°	90°
0°	4408	4408	4408
5°	4280	4331	4402
10°	4064	4183	4373
15°	3820	4006	4321
20°	3554	3795	4205
25°	3258	3542	4068
30°	2937	3274	3915
35°	2600	2995	3767
40°	2210	2703	3615
45°	1810	2389	3476
50°	1583	2051	3271
55°	1455	1769	3027
60°	1350	1591	2668
65°	1265	1496	2233
70°	1186	1370	1677
75°	1115	1251	1221
80°	1031	1146	1031
85°	939	1116	899

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3476 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.3	5.0
10°-20°	127.3	13.6
20°-30°	174.0	18.5
30°-40°	182.9	19.5
40°-50°	158.7	16.9
50°-60°	119.7	12.7
60°-70°	77.6	8.3
70°-80°	39.8	4.2
80°-90°	12.1	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°	348.6	37.1
0°-40°	531.4	56.6
0°-60°	809.8	86.2
0°-90°	939.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	939.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	495	502	501	505	509	46
15°	428	439	449	470	485	120
25°	343	355	373	401	428	157
35°	247	261	285	323	358	154
45°	149	163	196	245	285	117
55°	97	100	118	167	202	87
65°	62	63	73	89	110	62
75°	34	38	38	38	37	36
85°	10	12	11	11	9	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	511.9	511.9	511.9	511.9	511.9
2.5°	506.0	512.4	507.8	508.7	509.2
5°	495.1	501.9	501.0	505.1	509.2
7.5°	481.1	489.3	491.1	499.2	506.0
10°	464.8	473.9	478.4	491.5	500.1
12.5°	447.6	456.6	464.8	481.6	493.8
15°	428.5	439.0	449.4	469.8	484.7
17.5°	408.6	419.5	432.6	454.8	472.5
20°	387.8	398.7	414.1	438.1	458.9
22.5°	365.6	377.8	394.1	419.9	444.4
25°	342.9	355.2	372.8	401.4	428.1
27.5°	319.4	332.1	351.1	382.8	411.3
30°	295.4	309.0	329.3	362.9	393.7
32.5°	270.9	285.4	307.1	342.9	376.5
35°	247.3	260.9	284.9	323.0	358.3
37.5°	222.9	236.5	262.3	303.5	340.2
40°	196.6	211.6	240.5	283.1	321.6
42.5°	172.1	187.1	218.4	263.7	304.0
45°	148.6	162.6	196.2	245.1	285.4
47.5°	130.5	140.4	174.0	227.0	265.5
50°	118.2	122.8	153.1	207.0	244.2
52.5°	107.4	111.0	134.1	187.1	223.3
55°	96.9	99.7	117.8	167.2	201.6
57.5°	87.9	89.2	103.3	147.2	178.0
60°	78.4	80.2	92.4	126.8	154.9
62.5°	70.7	71.6	82.9	107.4	131.8
65°	62.1	63.4	73.4	88.8	109.6
67.5°	54.4	56.6	63.4	72.5	86.5
70°	47.1	50.3	54.4	58.9	66.6
72.5°	40.3	43.9	46.2	48.0	46.7
75°	33.5	37.6	37.6	38.1	36.7
77.5°	27.2	30.8	30.4	29.9	28.1
80°	20.8	24.0	23.1	22.7	20.8
82.5°	15.4	17.7	16.8	16.3	14.0
85°	9.5	11.8	11.3	10.9	9.1
87.5°	4.5	6.8	6.3	5.9	4.1
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	11.65	13.14	12.02	13.45	13.77	15.39	16.88	15.76	17.19	17.51
	3H	13.32	14.66	13.70	14.98	15.35	16.52	17.85	16.90	18.18	18.54
	4H	13.99	15.24	14.39	15.59	15.97	16.82	18.07	17.22	18.41	18.79
	6H	14.50	15.65	14.91	16.02	16.41	17.02	18.17	17.43	18.54	18.93
	8H	14.67	15.77	15.10	16.16	16.56	17.07	18.17	17.50	18.56	18.96
	12H	14.79	15.84	15.22	16.22	16.65	17.10	18.15	17.53	18.54	18.97
4H	2H	12.45	13.70	12.85	14.05	14.42	15.56	16.81	15.96	17.16	17.54
	3H	14.32	15.36	14.73	15.76	16.16	16.89	17.93	17.30	18.33	18.73
	4H	15.12	16.06	15.56	16.47	16.91	17.31	18.24	17.74	18.66	19.09
	6H	15.77	16.58	16.22	17.02	17.48	17.63	18.44	18.09	18.88	19.34
	8H	15.99	16.75	16.45	17.19	17.66	17.72	18.48	18.19	18.92	19.39
	12H	16.16	16.83	16.64	17.31	17.78	17.80	18.47	18.28	18.95	19.42
8H	4H	15.47	16.23	15.94	16.67	17.14	17.44	18.20	17.91	18.64	19.11
	6H	16.26	16.89	16.76	17.38	17.86	17.86	18.49	18.36	18.98	19.46
	8H	16.58	17.14	17.10	17.65	18.14	18.02	18.58	18.53	19.09	19.58
	12H	16.84	17.34	17.36	17.83	18.40	18.16	18.65	18.67	19.15	19.71
12H	4H	15.50	16.18	15.99	16.66	17.13	17.45	18.12	17.93	18.60	19.07
	6H	16.32	16.89	16.84	17.40	17.88	17.88	18.44	18.40	18.95	19.44
	8H	16.71	17.21	17.22	17.70	18.26	18.09	18.59	18.60	19.08	19.65