

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: P1060794

Luminaire Tested: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060794  
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-H350D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

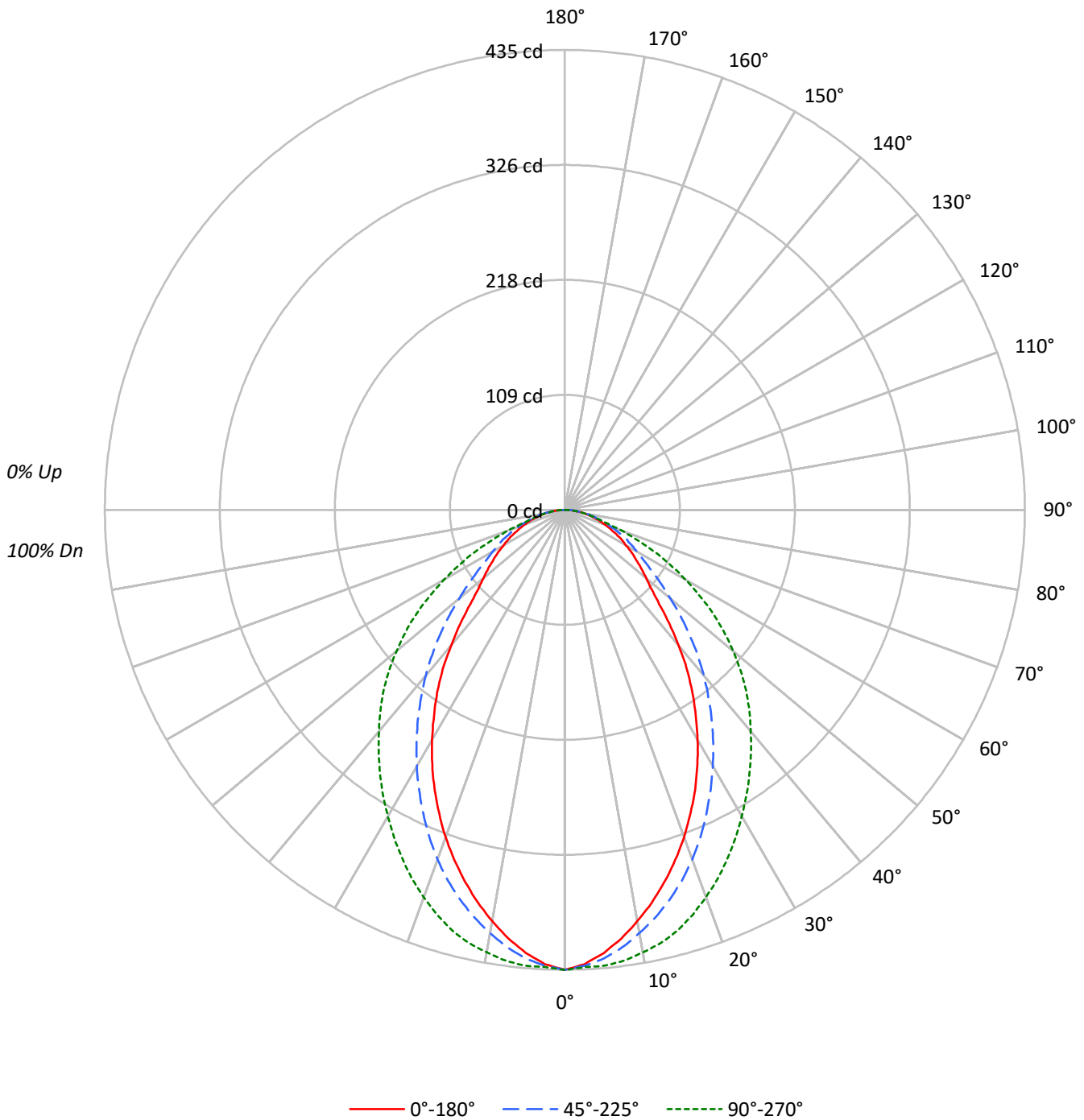
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 798.3 lumens  
Efficiency: N/A  
Efficacy: 68.2 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

TEST NUMBER: P1060794

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1060794

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

**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	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°	3747	3747	3747
5°	3637	3681	3741
10°	3454	3555	3717
15°	3247	3405	3673
20°	3020	3225	3574
25°	2770	3011	3457
30°	2496	2783	3327
35°	2210	2546	3201
40°	1878	2298	3073
45°	1538	2030	2954
50°	1346	1743	2780
55°	1237	1503	2572
60°	1147	1352	2268
65°	1074	1271	1899
70°	1007	1163	1425
75°	948	1065	1038
80°	878	972	878
85°	800	948	761

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2954 cd/sqm



TEST NUMBER: P1060794

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.2	5.0
10°-20°	108.2	13.6
20°-30°	147.9	18.5
30°-40°	155.4	19.5
40°-50°	134.9	16.9
50°-60°	101.7	12.7
60°-70°	65.9	8.3
70°-80°	33.9	4.2
80°-90°	10.3	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°	296.3	37.1
0°-40°	451.7	56.6
0°-60°	688.3	86.2
0°-90°	798.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	798.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	435	435	435	435	435	
5°	421	427	426	429	433	39
15°	364	373	382	399	412	102
25°	292	302	317	341	364	134
35°	210	222	242	274	304	131
45°	126	138	167	208	243	99
55°	82	85	100	142	171	74
65°	53	54	62	76	93	53
75°	28	32	32	32	31	30
85°	8	10	10	9	8	9
90°	0	0	0	0	0	



TEST NUMBER: P1060794

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	435.1	435.1	435.1	435.1	435.1
2.5°	430.1	435.5	431.6	432.4	432.8
5°	420.8	426.6	425.8	429.3	432.8
7.5°	408.9	415.8	417.4	424.3	430.1
10°	395.0	402.7	406.6	417.7	425.1
12.5°	380.4	388.1	395.0	409.3	419.7
15°	364.2	373.1	381.9	399.3	412.0
17.5°	347.3	356.5	367.7	386.6	401.6
20°	329.6	338.8	351.9	372.3	390.0
22.5°	310.7	321.1	335.0	356.9	377.7
25°	291.5	301.9	316.9	341.1	363.8
27.5°	271.4	282.2	298.4	325.3	349.6
30°	251.0	262.6	279.9	308.4	334.6
32.5°	230.2	242.6	261.0	291.5	319.9
35°	210.2	221.8	242.2	274.5	304.5
37.5°	189.4	201.0	222.9	258.0	289.1
40°	167.1	179.8	204.4	240.6	273.4
42.5°	146.3	159.0	185.6	224.1	258.3
45°	126.3	138.2	166.7	208.3	242.6
47.5°	110.9	119.4	147.8	192.9	225.6
50°	100.5	104.3	130.1	176.0	207.5
52.5°	91.2	94.3	114.0	159.0	189.8
55°	82.4	84.7	100.1	142.1	171.3
57.5°	74.7	75.8	87.8	125.1	151.3
60°	66.6	68.1	78.5	107.8	131.7
62.5°	60.1	60.8	70.5	91.2	112.0
65°	52.7	53.9	62.4	75.5	93.2
67.5°	46.2	48.1	53.9	61.6	73.5
70°	40.0	42.7	46.2	50.1	56.6
72.5°	34.3	37.3	39.3	40.8	39.7
75°	28.5	32.0	32.0	32.3	31.2
77.5°	23.1	26.2	25.8	25.4	23.9
80°	17.7	20.4	19.6	19.3	17.7
82.5°	13.1	15.0	14.2	13.9	11.9
85°	8.1	10.0	9.6	9.2	7.7
87.5°	3.9	5.8	5.4	5.0	3.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060794  
 CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-WVL-W

**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	11.09	12.58	11.45	12.89	13.20	14.83	16.32	15.19	16.63	16.94
	3H	12.76	14.09	13.13	14.42	14.78	15.96	17.29	16.33	17.62	17.98
	4H	13.42	14.67	13.82	15.02	15.40	16.25	17.50	16.65	17.85	18.23
	6H	13.93	15.08	14.34	15.45	15.84	16.45	17.60	16.86	17.97	18.36
	8H	14.11	15.20	14.53	15.59	16.00	16.51	17.60	16.93	17.99	18.39
	12H	14.23	15.28	14.66	15.66	16.09	16.54	17.59	16.97	17.97	18.40
4H	2H	11.88	13.13	12.28	13.48	13.86	14.99	16.24	15.39	16.59	16.97
	3H	13.75	14.79	14.16	15.19	15.59	16.33	17.36	16.74	17.76	18.16
	4H	14.56	15.49	14.99	15.91	16.35	16.74	17.67	17.18	18.09	18.53
	6H	15.20	16.01	15.66	16.46	16.92	17.06	17.87	17.52	18.32	18.78
	8H	15.43	16.18	15.89	16.63	17.10	17.16	17.92	17.62	18.36	18.83
	12H	15.59	16.27	16.07	16.75	17.22	17.23	17.91	17.71	18.38	18.86
8H	4H	14.91	15.66	15.37	16.11	16.58	16.88	17.63	17.34	18.08	18.54
	6H	15.70	16.32	16.19	16.81	17.29	17.30	17.92	17.79	18.41	18.89
	8H	16.02	16.58	16.53	17.09	17.58	17.45	18.01	17.97	18.52	19.01
	12H	16.28	16.78	16.79	17.27	17.83	17.59	18.09	18.10	18.58	19.15
12H	4H	14.94	15.61	15.42	16.09	16.56	16.88	17.56	17.36	18.03	18.51
	6H	15.76	16.32	16.27	16.83	17.32	17.32	17.88	17.83	18.39	18.88
	8H	16.14	16.64	16.65	17.13	17.70	17.53	18.02	18.04	18.51	19.08