

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: P1060793

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060793
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)
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-S
Description: DEFINE 4 SILVER 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

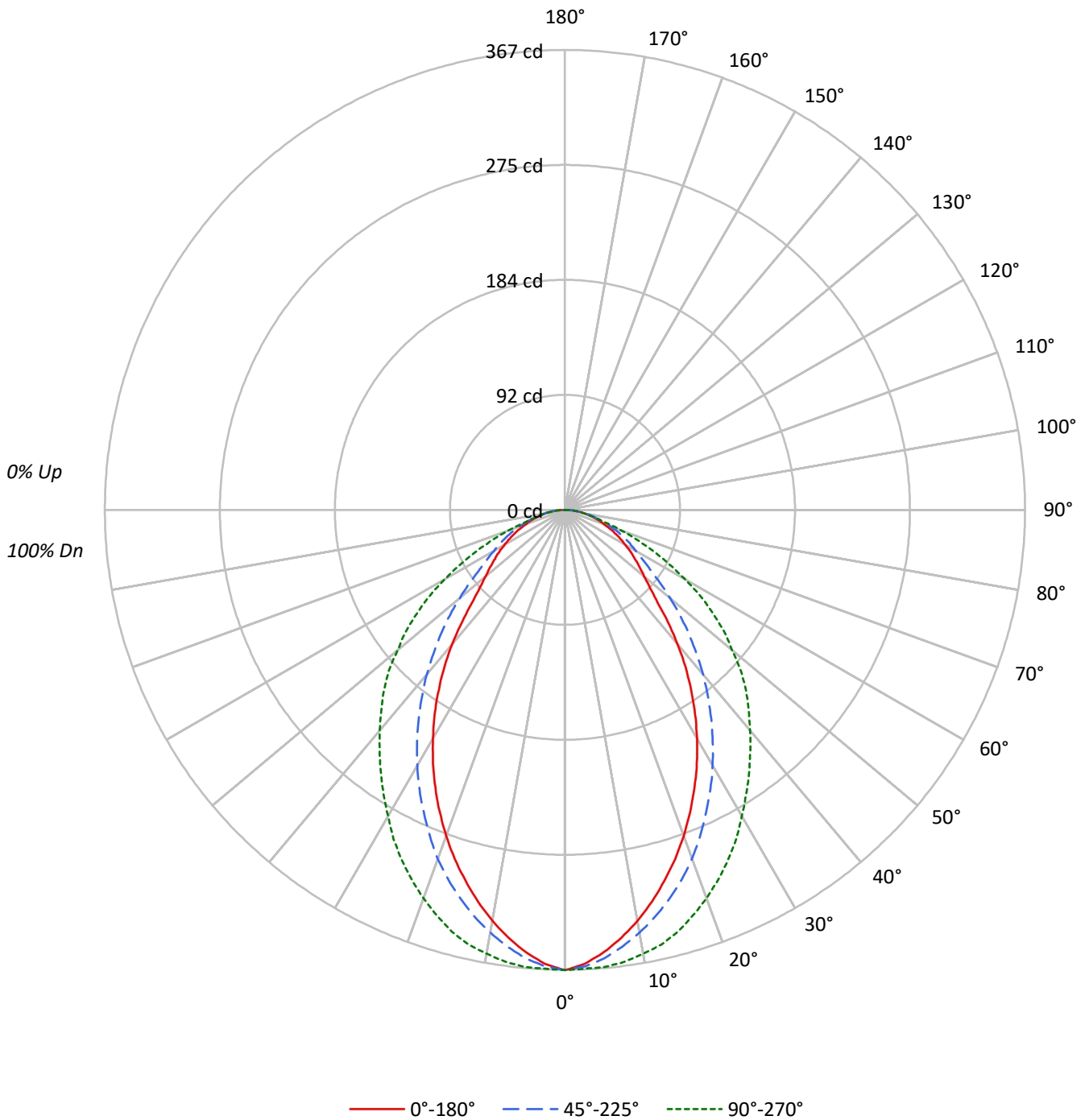
Lumens per Lamp: N/A
Luminaire Lumens: 668.6 lumens
Efficiency: N/A
Efficacy: 57.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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: P1060793

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

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87						87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75						75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65						65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57						57														
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50						50														
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45						45														
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41						41														
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37						37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34						34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31						31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3163	3163	3163
5°	3065	3105	3165
10°	2912	2996	3144
15°	2732	2865	3106
20°	2537	2716	3023
25°	2323	2531	2926
30°	2094	2343	2806
35°	1845	2137	2691
40°	1570	1926	2583
45°	1275	1701	2489
50°	1104	1464	2331
55°	1022	1243	2162
60°	954	1121	1896
65°	894	1051	1577
70°	833	969	1193
75°	795	895	858
80°	744	823	724
85°	682	761	573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2489 cd/sqm



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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	5.1
10°-20°	91.1	13.6
20°-30°	124.5	18.6
30°-40°	130.4	19.5
40°-50°	112.8	16.9
50°-60°	84.8	12.7
60°-70°	54.7	8.2
70°-80°	28.0	4.2
80°-90°	8.4	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°	249.5	37.3
0°-40°	379.9	56.8
0°-60°	577.5	86.4
0°-90°	668.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	668.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	367	367	367	367	367	
5°	355	360	359	362	366	33
15°	306	314	321	336	348	86
25°	244	254	266	287	308	112
35°	176	186	203	230	256	109
45°	105	116	140	174	204	83
55°	68	70	83	118	144	61
65°	44	45	52	62	77	44
75°	24	27	27	27	26	25
85°	7	8	8	7	6	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	367.3	367.3	367.3	367.3	367.3
2.5°	362.6	367.3	364.6	365.3	366.5
5°	354.6	359.9	359.2	361.9	366.1
7.5°	344.5	350.3	351.5	357.6	363.8
10°	333.0	339.5	342.6	351.9	359.6
12.5°	320.3	327.2	332.6	344.2	355.3
15°	306.4	314.1	321.4	336.1	348.4
17.5°	292.2	299.9	309.5	325.7	339.5
20°	276.8	285.3	296.4	313.4	329.9
22.5°	261.0	269.9	281.8	300.3	319.5
25°	244.5	253.7	266.4	287.2	308.0
27.5°	227.9	237.1	251.4	273.3	296.0
30°	210.6	220.2	235.6	259.5	282.2
32.5°	193.3	203.6	219.4	244.8	269.1
35°	175.5	185.6	203.3	230.2	256.0
37.5°	157.8	168.2	187.1	216.0	242.9
40°	139.7	150.5	171.3	201.7	229.8
42.5°	121.6	133.2	155.1	187.1	216.7
45°	104.7	115.5	139.7	174.0	204.4
47.5°	92.0	99.3	124.3	161.3	190.6
50°	82.4	86.2	109.3	147.4	174.0
52.5°	75.1	77.8	95.5	132.4	160.5
55°	68.1	70.4	82.8	118.2	144.0
57.5°	62.0	63.1	73.1	104.3	128.2
60°	55.4	56.6	65.1	89.3	110.1
62.5°	49.7	50.4	58.5	75.1	93.5
65°	43.9	44.7	51.6	62.4	77.4
67.5°	38.5	39.7	45.0	50.8	61.6
70°	33.1	35.4	38.5	41.2	47.4
72.5°	28.5	30.8	32.3	33.1	33.5
75°	23.9	26.6	26.9	26.6	25.8
77.5°	19.2	21.6	21.6	20.8	20.0
80°	15.0	16.9	16.6	15.8	14.6
82.5°	11.2	12.3	11.9	11.2	10.0
85°	6.9	8.1	7.7	7.3	5.8
87.5°	3.5	4.6	4.2	3.8	2.3
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	10.43	11.91	10.80	12.23	12.54	14.21	15.69	14.57	16.00	16.32
	3H	12.09	13.42	12.47	13.74	14.11	15.32	16.65	15.70	16.98	17.34
	4H	12.76	14.00	13.16	14.35	14.73	15.61	16.86	16.01	17.20	17.58
	6H	13.27	14.42	13.68	14.79	15.18	15.81	16.96	16.22	17.32	17.72
	8H	13.45	14.55	13.88	14.94	15.34	15.86	16.95	16.29	17.34	17.75
	12H	13.58	14.62	14.01	15.01	15.44	15.89	16.93	16.32	17.32	17.75
4H	2H	11.21	12.46	11.61	12.81	13.19	14.36	15.61	14.76	15.96	16.34
	3H	13.08	14.11	13.49	14.51	14.91	15.68	16.71	16.09	17.11	17.51
	4H	13.89	14.82	14.32	15.23	15.67	16.09	17.01	16.52	17.43	17.87
	6H	14.53	15.34	14.99	15.78	16.24	16.40	17.21	16.86	17.65	18.11
	8H	14.76	15.52	15.23	15.96	16.43	16.49	17.25	16.96	17.69	18.16
	12H	14.93	15.60	15.41	16.08	16.56	16.56	17.23	17.04	17.71	18.18
8H	4H	14.24	14.99	14.70	15.44	15.90	16.22	16.97	16.68	17.42	17.89
	6H	15.03	15.65	15.53	16.14	16.62	16.63	17.25	17.13	17.75	18.22
	8H	15.35	15.91	15.86	16.42	16.91	16.78	17.34	17.30	17.85	18.34
	12H	15.61	16.11	16.12	16.60	17.17	16.91	17.40	17.42	17.89	18.46
12H	4H	14.27	14.94	14.75	15.42	15.89	16.22	16.90	16.71	17.38	17.85
	6H	15.09	15.65	15.61	16.16	16.65	16.65	17.21	17.17	17.72	18.21
	8H	15.48	15.97	15.99	16.46	17.03	16.85	17.35	17.37	17.84	18.41