

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: P1060820

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060820  
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-H350D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

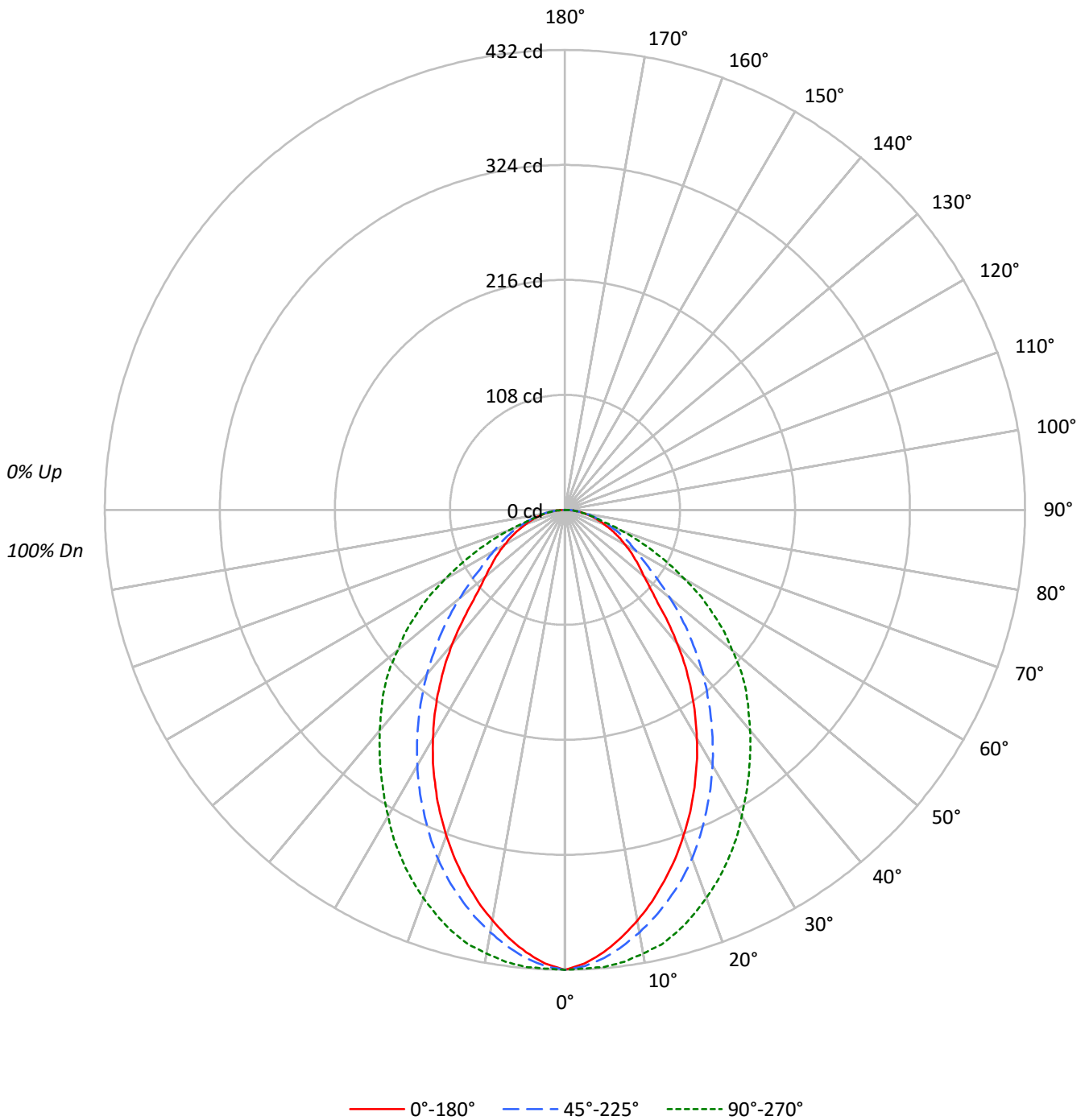
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 786.7 lumens  
Efficiency: N/A  
Efficacy: 67.2 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

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

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

	0°	45°	90°
0°	3721	3721	3721
5°	3606	3653	3724
10°	3426	3525	3700
15°	3215	3372	3654
20°	2985	3196	3557
25°	2733	2978	3443
30°	2464	2756	3301
35°	2171	2515	3166
40°	1848	2266	3040
45°	1500	2002	2929
50°	1298	1723	2742
55°	1204	1462	2543
60°	1123	1318	2230
65°	1051	1237	1854
70°	982	1141	1402
75°	935	1055	1008
80°	878	967	853
85°	810	899	672

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2929 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.9	5.1
10°-20°	107.2	13.6
20°-30°	146.4	18.6
30°-40°	153.4	19.5
40°-50°	132.8	16.9
50°-60°	99.8	12.7
60°-70°	64.3	8.2
70°-80°	33.0	4.2
80°-90°	9.8	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°	293.6	37.3
0°-40°	447.0	56.8
0°-60°	679.5	86.4
0°-90°	786.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	786.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	417	424	423	426	431	39
15°	361	370	378	395	410	101
25°	288	298	313	338	362	132
35°	206	218	239	271	301	129
45°	123	136	164	205	240	97
55°	80	83	97	139	169	72
65°	52	52	61	73	91	51
75°	28	31	32	31	30	30
85°	8	10	9	9	7	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	432.1	432.1	432.1	432.1	432.1
2.5°	426.7	432.1	428.9	429.9	431.2
5°	417.2	423.5	422.6	425.8	430.8
7.5°	405.4	412.2	413.5	420.8	428.0
10°	391.8	399.5	403.1	414.0	423.1
12.5°	376.9	385.0	391.4	404.9	418.1
15°	360.6	369.6	378.2	395.4	409.9
17.5°	343.8	352.9	364.2	383.2	399.5
20°	325.7	335.6	348.8	368.7	388.2
22.5°	307.1	317.5	331.6	353.3	376.0
25°	287.6	298.5	313.4	337.9	362.4
27.5°	268.1	279.0	295.8	321.6	348.3
30°	247.8	259.1	277.2	305.3	332.0
32.5°	227.4	239.6	258.2	288.1	316.6
35°	206.5	218.3	239.2	270.9	301.2
37.5°	185.7	197.9	220.1	254.1	285.8
40°	164.4	177.1	201.6	237.3	270.4
42.5°	143.1	156.7	182.5	220.1	255.0
45°	123.2	135.9	164.4	204.7	240.5
47.5°	108.3	116.9	146.3	189.8	224.2
50°	96.9	101.5	128.6	173.5	204.7
52.5°	88.3	91.5	112.3	155.8	188.9
55°	80.2	82.9	97.4	139.1	169.4
57.5°	72.9	74.3	86.1	122.8	150.8
60°	65.2	66.6	76.5	105.1	129.5
62.5°	58.4	59.3	68.8	88.3	110.1
65°	51.6	52.5	60.7	73.4	91.0
67.5°	45.3	46.7	53.0	59.8	72.5
70°	39.0	41.7	45.3	48.5	55.7
72.5°	33.5	36.2	38.0	39.0	39.4
75°	28.1	31.3	31.7	31.3	30.3
77.5°	22.6	25.4	25.4	24.5	23.6
80°	17.7	19.9	19.5	18.6	17.2
82.5°	13.1	14.5	14.0	13.1	11.8
85°	8.2	9.5	9.1	8.6	6.8
87.5°	4.1	5.4	5.0	4.5	2.7
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	11.00	12.48	11.36	12.80	13.11	14.77	16.26	15.14	16.57	16.88
	3H	12.66	13.98	13.03	14.31	14.67	15.89	17.22	16.26	17.54	17.91
	4H	13.33	14.57	13.73	14.92	15.30	16.18	17.42	16.58	17.77	18.15
	6H	13.84	14.99	14.25	15.35	15.75	16.37	17.52	16.79	17.89	18.28
	8H	14.02	15.11	14.45	15.50	15.90	16.43	17.52	16.85	17.91	18.31
	12H	14.14	15.19	14.58	15.57	16.00	16.45	17.50	16.89	17.88	18.31
4H	2H	11.78	13.03	12.18	13.38	13.75	14.93	16.18	15.33	16.53	16.91
	3H	13.64	14.68	14.05	15.08	15.48	16.24	17.28	16.65	17.68	18.08
	4H	14.45	15.38	14.89	15.80	16.24	16.65	17.58	17.08	18.00	18.44
	6H	15.10	15.91	15.56	16.35	16.81	16.97	17.78	17.43	18.22	18.68
	8H	15.33	16.08	15.79	16.53	16.99	17.06	17.82	17.52	18.26	18.73
	12H	15.50	16.17	15.98	16.65	17.12	17.12	17.80	17.61	18.27	18.75
8H	4H	14.80	15.56	15.27	16.00	16.47	16.78	17.54	17.25	17.98	18.45
	6H	15.60	16.22	16.09	16.71	17.19	17.20	17.82	17.70	18.31	18.79
	8H	15.92	16.47	16.43	16.98	17.47	17.35	17.91	17.86	18.42	18.91
	12H	16.18	16.67	16.69	17.17	17.73	17.47	17.97	17.98	18.46	19.02
12H	4H	14.83	15.51	15.32	15.98	16.46	16.79	17.46	17.27	17.94	18.41
	6H	15.66	16.22	16.17	16.73	17.22	17.22	17.78	17.73	18.29	18.78
	8H	16.04	16.54	16.55	17.03	17.60	17.42	17.92	17.93	18.41	18.97