

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060399

Luminaire Tested: S124RDRP-S350D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060399  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S350D840-X4F0-XX-UDD-BVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

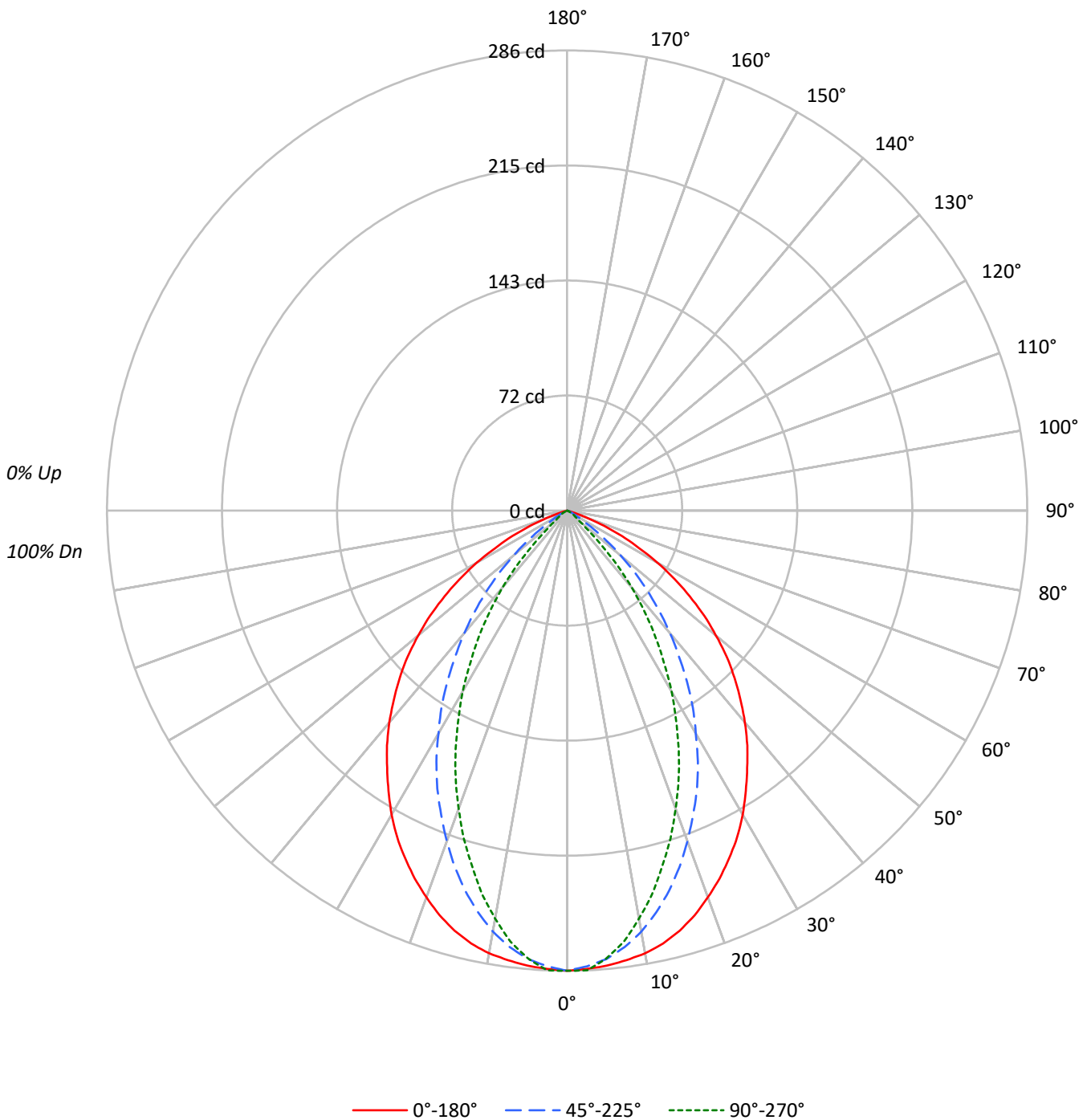
Lumens per Lamp: N/A  
Luminaire Lumens: 373.4 lumens  
Efficiency: N/A  
Efficacy: 29.9 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 12.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	2463	2463	2463
5°	2454	2419	2415
10°	2443	2323	2252
15°	2410	2181	2037
20°	2344	2003	1806
25°	2265	1814	1559
30°	2170	1590	1291
35°	2051	1364	1004
40°	1932	1120	701
45°	1791	861	347
50°	1617	581	117
55°	1396	297	81
60°	1118	107	57
65°	766	59	24
70°	342	30	20
75°	0	13	13
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1791 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.4	7.1
10°-20°	69.2	18.5
20°-30°	89.6	24.0
30°-40°	85.1	22.8
40°-50°	60.3	16.1
50°-60°	31.0	8.3
60°-70°	10.8	2.9
70°-80°	0.9	0.2
80°-90°	0.0	0.0
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°	185.2	49.6
0°-40°	270.4	72.4
0°-60°	361.6	96.9
0°-90°	373.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	373.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	286	286	286	286	286	
5°	284	284	280	280	279	27
15°	270	262	245	233	228	76
25°	238	220	191	171	164	110
35°	195	166	130	105	96	122
45°	147	113	71	40	28	113
55°	93	61	20	6	5	83
65°	38	18	3	2	1	37
75°	0	0	0	0	0	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	286.0	286.0	286.0	286.0	286.0
2.5°	285.1	286.0	283.5	285.6	286.0
5°	283.9	284.3	279.8	279.8	279.4
7.5°	281.8	281.0	273.6	270.7	270.3
10°	279.4	276.5	265.7	259.5	257.5
12.5°	275.6	270.3	255.8	246.7	244.2
15°	270.3	262.0	244.6	233.1	228.5
17.5°	263.7	252.9	232.2	218.2	213.6
20°	255.8	242.2	218.6	202.9	197.1
22.5°	247.5	231.8	204.6	186.8	181.0
25°	238.4	219.8	190.9	170.7	164.1
27.5°	228.9	207.0	176.0	155.0	146.3
30°	218.2	194.2	159.9	138.0	129.8
32.5°	206.6	180.2	145.5	121.9	112.0
35°	195.1	166.5	129.8	104.6	95.5
37.5°	183.9	153.7	114.1	87.6	78.9
40°	171.9	139.7	99.6	72.3	62.4
42.5°	159.5	126.0	84.7	56.6	45.9
45°	147.1	113.2	70.7	40.5	28.5
47.5°	134.7	99.6	57.0	25.6	15.3
50°	120.7	86.4	43.4	13.6	8.7
52.5°	107.4	74.0	31.0	7.9	6.6
55°	93.0	61.2	19.8	5.8	5.4
57.5°	79.3	48.8	11.2	4.5	4.1
60°	64.9	37.6	6.2	3.7	3.3
62.5°	50.4	27.3	4.1	2.5	2.1
65°	37.6	18.2	2.9	1.7	1.2
67.5°	24.8	10.3	2.1	0.8	0.8
70°	13.6	5.0	1.2	0.8	0.8
72.5°	5.0	1.7	0.8	0.4	0.4
75°	0.0	0.4	0.4	0.4	0.4
77.5°	0.0	0.0	0.0	0.0	0.4
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	11.66	12.92	12.03	13.23	13.55	0.00	0.00	0.00	0.00	0.00
	3H	11.94	13.04	12.32	13.38	13.74	0.00	0.00	0.00	0.00	0.00
	4H	11.86	12.89	12.27	13.24	13.62	0.00	0.00	0.00	0.00	0.00
	6H	11.78	12.71	12.19	13.09	13.48	0.00	0.00	0.00	0.00	0.00
	8H	11.73	12.62	12.16	13.01	13.41	0.00	0.00	0.00	0.00	0.00
	12H	11.68	12.53	12.12	12.91	13.34	0.00	0.00	0.00	0.00	0.00
4H	2H	11.44	12.46	11.84	12.81	13.20	0.00	0.00	0.00	0.00	0.00
	3H	11.72	12.55	12.13	12.95	13.36	0.00	0.00	0.00	0.00	0.00
	4H	11.63	12.36	12.06	12.78	13.23	0.00	0.00	0.00	0.00	0.00
	6H	11.54	12.17	12.00	12.62	13.09	0.00	0.00	0.00	0.00	0.00
	8H	11.48	12.07	11.95	12.51	12.99	0.00	0.00	0.00	0.00	0.00
	12H	11.43	11.94	11.91	12.43	12.90	0.00	0.00	0.00	0.00	0.00
8H	4H	11.48	12.07	11.95	12.51	12.99	0.00	0.00	0.00	0.00	0.00
	6H	11.37	11.85	11.87	12.34	12.83	0.00	0.00	0.00	0.00	0.00
	8H	11.30	11.73	11.83	12.25	12.74	0.00	0.00	0.00	0.00	0.00
	12H	11.25	11.63	11.77	12.13	12.70	0.00	0.00	0.00	0.00	0.00
12H	4H	11.43	11.94	11.91	12.43	12.90	0.00	0.00	0.00	0.00	0.00
	6H	11.30	11.73	11.83	12.25	12.74	0.00	0.00	0.00	0.00	0.00
	8H	11.25	11.63	11.77	12.13	12.70	0.00	0.00	0.00	0.00	0.00