

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: P1056022

Luminaire Tested: S124R3DR-S350D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056022  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S350D930-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

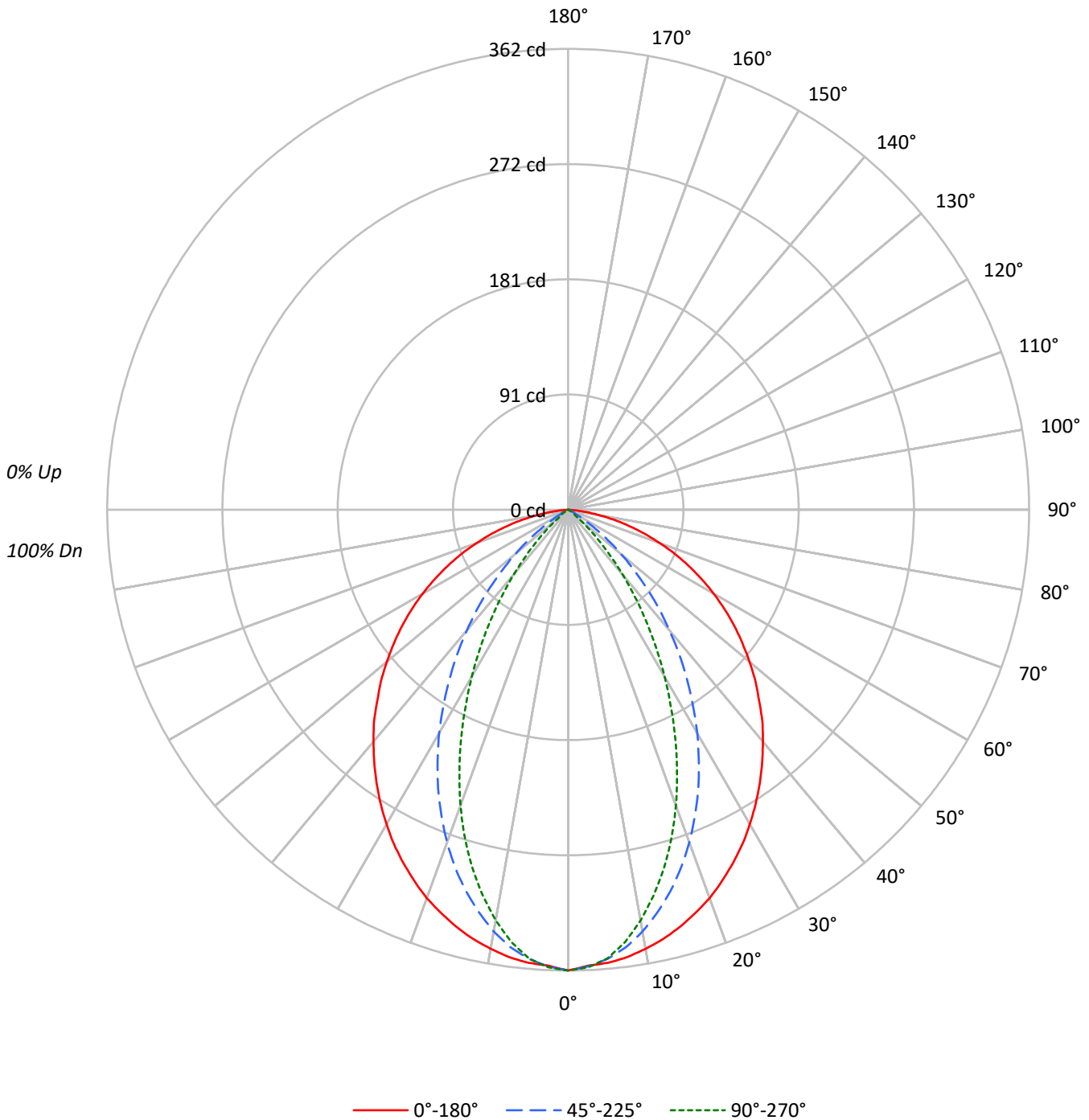
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 505.9 lumens  
Efficiency: N/A  
Efficacy: 40.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.6  
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	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

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

	0°	45°	90°
0°	3201	3201	3201
5°	3171	3144	3140
10°	3145	3020	2940
15°	3106	2839	2664
20°	3055	2618	2327
25°	2987	2358	1942
30°	2913	2068	1544
35°	2830	1754	1149
40°	2745	1429	766
45°	2650	1092	421
50°	2557	747	117
55°	2456	405	77
60°	2334	126	44
65°	2182	82	23
70°	1972	36	10
75°	1698	14	0
80°	1283	0	0
85°	538	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2650 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.4	6.6
10°-20°	87.7	17.3
20°-30°	113.3	22.4
30°-40°	108.3	21.4
40°-50°	81.0	16.0
50°-60°	48.2	9.5
60°-70°	24.5	4.8
70°-80°	8.5	1.7
80°-90°	1.2	0.2
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°	234.3	46.3
0°-40°	342.6	67.7
0°-60°	471.8	93.2
0°-90°	505.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	505.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	362	362	362	362	362	
5°	357	360	354	352	354	34
15°	339	332	310	296	291	96
25°	306	285	242	210	199	141
35°	262	226	162	121	106	164
45°	212	162	87	46	34	164
55°	159	99	26	6	5	142
65°	104	40	4	1	1	103
75°	50	5	0	0	0	53
85°	5	0	0	0	0	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	362.0	362.0	362.0	362.0	362.0
2.5°	358.4	362.7	359.1	359.5	359.8
5°	357.3	360.2	354.2	352.4	353.8
7.5°	354.5	355.6	346.7	342.1	342.4
10°	350.3	349.2	336.4	328.6	327.5
12.5°	345.3	341.7	324.0	312.6	310.2
15°	339.3	332.2	310.2	295.6	291.0
17.5°	332.2	321.9	294.9	275.7	270.1
20°	324.7	310.5	278.2	254.4	247.3
22.5°	315.8	297.7	260.1	232.1	223.2
25°	306.2	285.0	241.7	209.7	199.1
27.5°	296.3	271.1	222.1	187.0	174.6
30°	285.3	256.6	202.6	163.9	151.2
32.5°	274.0	241.7	182.4	142.7	128.5
35°	262.2	226.0	162.5	121.0	106.5
37.5°	250.2	210.4	143.4	100.4	85.5
40°	237.8	194.5	123.8	80.9	66.4
42.5°	225.7	178.5	105.4	62.5	49.0
45°	211.9	162.5	87.3	46.5	33.7
47.5°	199.4	146.9	69.9	31.6	19.9
50°	185.9	130.2	54.3	18.5	8.5
52.5°	172.5	114.6	39.7	8.2	6.4
55°	159.3	99.0	26.3	6.0	5.0
57.5°	145.5	83.4	14.2	4.6	3.5
60°	132.0	68.1	7.1	3.5	2.5
62.5°	118.2	53.6	5.7	2.1	1.4
65°	104.3	40.1	3.9	1.4	1.1
67.5°	90.5	27.3	2.5	0.7	0.4
70°	76.3	16.7	1.4	0.4	0.4
72.5°	62.8	8.5	0.7	0.4	0.4
75°	49.7	5.3	0.4	0.4	0.0
77.5°	36.9	2.8	0.4	0.4	0.0
80°	25.2	1.1	0.0	0.0	0.0
82.5°	14.5	0.4	0.0	0.0	0.0
85°	5.3	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	14.50	15.83	14.86	16.14	16.45	0.00	0.00	0.00	0.00	0.00
	3H	16.04	17.22	16.42	17.55	17.91	0.00	0.00	0.00	0.00	0.00
	4H	16.63	17.73	17.04	18.08	18.46	0.00	0.00	0.00	0.00	0.00
	6H	17.05	18.06	17.46	18.43	18.82	0.00	0.00	0.00	0.00	0.00
	8H	17.15	18.10	17.58	18.49	18.90	0.00	0.00	0.00	0.00	0.00
	12H	17.17	18.08	17.60	18.46	18.89	0.00	0.00	0.00	0.00	0.00
4H	2H	14.27	15.37	14.68	15.72	16.10	0.00	0.00	0.00	0.00	0.00
	3H	15.84	16.73	16.25	17.14	17.54	0.00	0.00	0.00	0.00	0.00
	4H	16.42	17.22	16.86	17.64	18.08	0.00	0.00	0.00	0.00	0.00
	6H	16.88	17.57	17.34	18.01	18.48	0.00	0.00	0.00	0.00	0.00
	8H	17.00	17.64	17.47	18.09	18.56	0.00	0.00	0.00	0.00	0.00
	12H	17.04	17.61	17.53	18.09	18.56	0.00	0.00	0.00	0.00	0.00
8H	4H	16.29	16.93	16.75	17.37	17.84	0.00	0.00	0.00	0.00	0.00
	6H	16.73	17.25	17.23	17.74	18.23	0.00	0.00	0.00	0.00	0.00
	8H	16.84	17.31	17.36	17.83	18.32	0.00	0.00	0.00	0.00	0.00
	12H	16.89	17.30	17.41	17.80	18.37	0.00	0.00	0.00	0.00	0.00
12H	4H	16.24	16.80	16.73	17.29	17.76	0.00	0.00	0.00	0.00	0.00
	6H	16.66	17.13	17.19	17.65	18.14	0.00	0.00	0.00	0.00	0.00
	8H	16.80	17.21	17.31	17.71	18.28	0.00	0.00	0.00	0.00	0.00