

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: P1056185

Luminaire Tested: S124R3DR-H575D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056185  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-H575D930-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

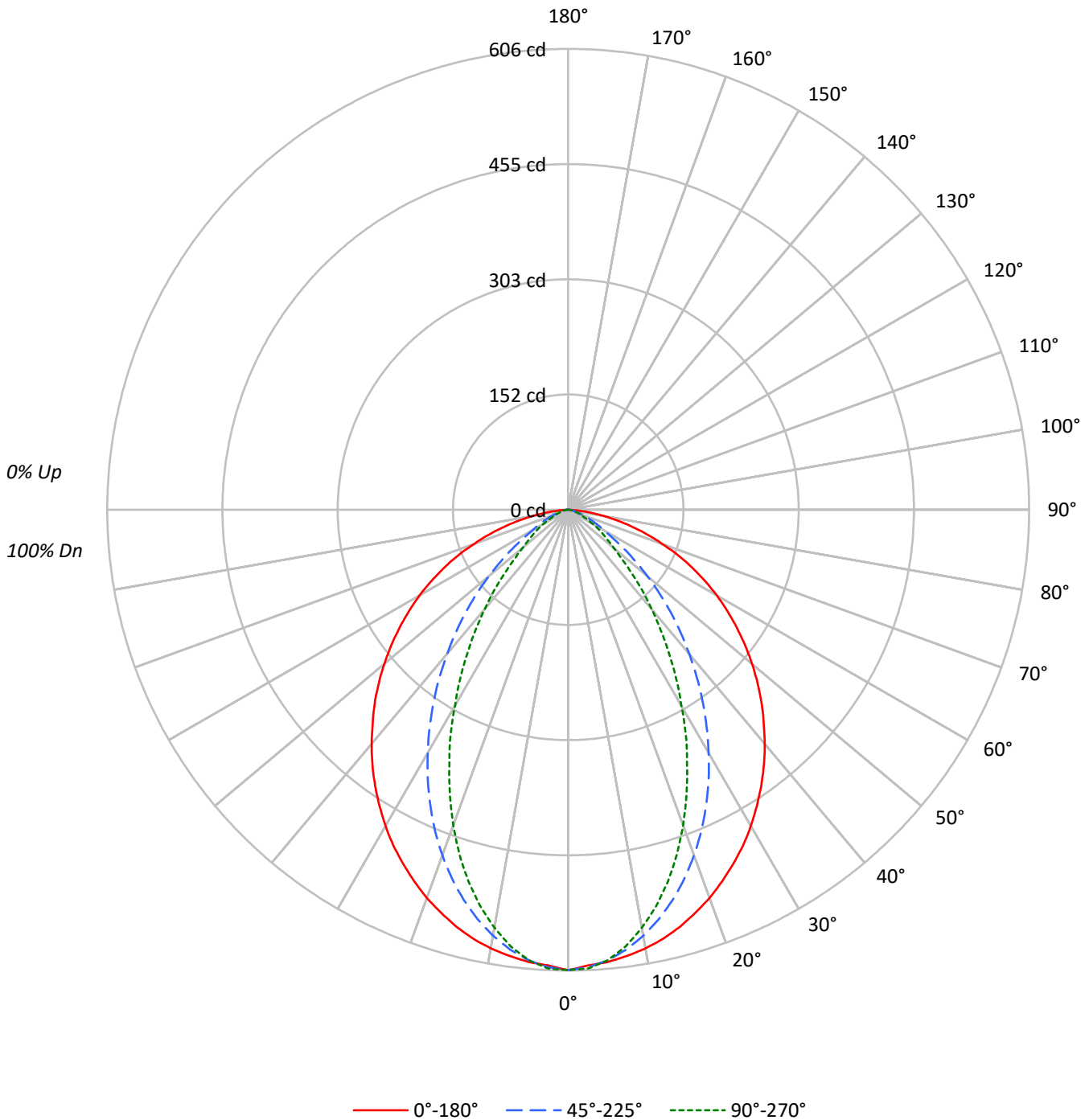
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 979.0 lumens  
Efficiency: N/A  
Efficacy: 56.6 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

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

	0°	45°	90°
0°	5353	5353	5353
5°	5298	5278	5278
10°	5258	5107	5010
15°	5196	4860	4633
20°	5113	4551	4153
25°	5010	4185	3608
30°	4903	3769	3039
35°	4776	3329	2501
40°	4639	2857	1971
45°	4498	2376	1473
50°	4342	1869	1078
55°	4171	1381	860
60°	3987	957	658
65°	3751	743	483
70°	3397	525	380
75°	2965	366	290
80°	2383	285	260
85°	1319	233	233

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4498 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.2	5.7
10°-20°	150.1	15.3
20°-30°	200.1	20.4
30°-40°	201.5	20.6
40°-50°	165.3	16.9
50°-60°	113.0	11.5
60°-70°	63.1	6.4
70°-80°	25.0	2.6
80°-90°	4.8	0.5
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°	406.4	41.5
0°-40°	607.9	62.1
0°-60°	886.1	90.5
0°-90°	979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	979.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	597	604	595	592	595	57
15°	568	562	531	512	506	160
25°	514	488	429	386	370	237
35°	442	396	308	250	232	277
45°	360	294	190	134	118	277
55°	271	190	90	60	56	242
65°	179	90	36	25	23	177
75°	87	24	11	9	8	93
85°	13	2	2	2	2	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	605.5	605.5	605.5	605.5	605.5
2.5°	599.8	607.1	602.1	602.6	603.8
5°	597.0	603.8	594.7	591.9	594.7
7.5°	591.9	597.0	583.5	577.8	579.0
10°	585.7	587.4	568.8	559.2	558.1
12.5°	577.8	575.6	551.3	537.2	533.9
15°	567.7	561.5	531.0	512.4	506.2
17.5°	555.8	545.1	508.5	484.3	475.2
20°	543.4	527.7	483.7	452.7	441.4
22.5°	528.8	509.1	457.2	419.4	406.5
25°	513.6	488.2	429.0	385.6	369.8
27.5°	497.8	466.8	399.7	351.2	335.4
30°	480.3	443.7	369.2	316.8	297.7
32.5°	461.7	420.0	338.8	283.0	265.0
35°	442.5	395.7	308.4	249.7	231.7
37.5°	422.8	370.9	277.9	218.2	200.1
40°	401.9	345.6	247.5	188.3	170.8
42.5°	380.5	319.6	218.2	160.1	143.8
45°	359.7	293.7	190.0	133.6	117.8
47.5°	337.7	267.8	162.4	108.8	95.3
50°	315.7	241.8	135.9	87.4	78.4
52.5°	293.1	215.9	111.6	71.6	65.4
55°	270.6	190.0	89.6	59.8	55.8
57.5°	248.0	164.0	69.3	50.7	46.2
60°	225.5	138.7	54.1	41.2	37.2
62.5°	202.4	113.3	44.5	32.7	29.3
65°	179.3	90.2	35.5	25.4	23.1
67.5°	156.2	68.8	27.1	19.7	18.0
70°	131.4	49.0	20.3	15.2	14.7
72.5°	109.9	33.3	14.7	11.8	11.3
75°	86.8	23.7	10.7	9.0	8.5
77.5°	67.1	15.2	7.9	7.3	6.8
80°	46.8	8.5	5.6	5.1	5.1
82.5°	28.8	4.5	3.9	3.4	3.4
85°	13.0	2.3	2.3	2.3	2.3
87.5°	2.3	1.1	1.1	1.1	1.1
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	16.55	17.96	16.92	18.27	18.59	7.64	9.05	8.00	9.36	9.67
	3H	18.14	19.39	18.52	19.72	20.08	8.23	9.48	8.61	9.81	10.17
	4H	18.73	19.90	19.13	20.25	20.63	8.39	9.56	8.79	9.91	10.29
	6H	19.17	20.24	19.58	20.61	21.00	8.50	9.57	8.91	9.94	10.33
	8H	19.28	20.30	19.71	20.69	21.09	8.52	9.54	8.95	9.93	10.33
	12H	19.32	20.30	19.75	20.68	21.11	8.53	9.50	8.96	9.88	10.31
4H	2H	16.41	17.57	16.81	17.92	18.31	8.22	9.39	8.62	9.74	10.12
	3H	18.05	19.01	18.47	19.42	19.82	8.93	9.89	9.35	10.30	10.70
	4H	18.66	19.52	19.09	19.94	20.38	9.14	10.00	9.57	10.41	10.86
	6H	19.15	19.89	19.61	20.34	20.80	9.31	10.05	9.77	10.49	10.96
	8H	19.30	19.99	19.76	20.43	20.90	9.34	10.03	9.81	10.48	10.95
	12H	19.37	19.98	19.85	20.46	20.94	9.37	9.98	9.85	10.46	10.93
8H	4H	18.55	19.24	19.02	19.69	20.16	9.41	10.10	9.88	10.55	11.02
	6H	19.03	19.60	19.53	20.10	20.58	9.62	10.18	10.12	10.68	11.16
	8H	19.18	19.69	19.70	20.20	20.69	9.67	10.18	10.19	10.70	11.19
	12H	19.27	19.72	19.78	20.21	20.78	9.74	10.18	10.25	10.68	11.25
12H	4H	18.51	19.13	19.00	19.61	20.08	9.44	10.05	9.92	10.53	11.01
	6H	18.98	19.49	19.50	20.00	20.49	9.64	10.15	10.16	10.67	11.16
	8H	19.14	19.59	19.66	20.09	20.66	9.74	10.19	10.25	10.68	11.25