

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: P1060885

Luminaire Tested: S124RDRP-H575D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060885  
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-H575D840-X4F0-XX-UDD-BVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

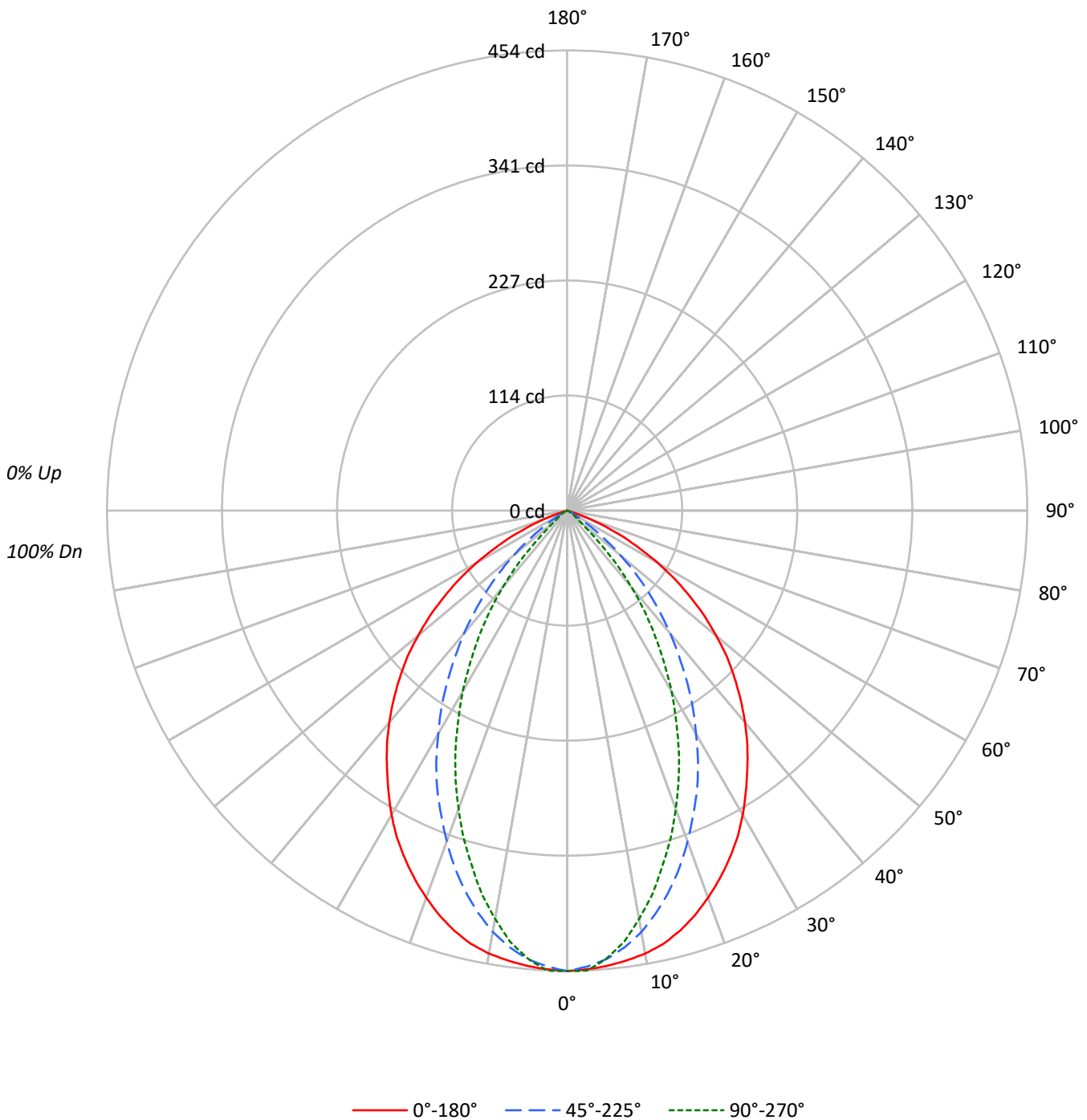
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 593.2 lumens  
Efficiency: N/A  
Efficacy: 34.1 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): 17.4  
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°	3912	3912	3912
5°	3898	3841	3836
10°	3881	3691	3576
15°	3827	3464	3236
20°	3724	3183	2869
25°	3599	2882	2476
30°	3446	2527	2049
35°	3258	2167	1594
40°	3070	1778	1114
45°	2846	1368	552
50°	2568	923	185
55°	2217	473	128
60°	1776	169	91
65°	1216	94	41
70°	546	50	33
75°	0	23	23
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2846 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.0	7.1
10°-20°	110.0	18.5
20°-30°	142.4	24.0
30°-40°	135.3	22.8
40°-50°	95.8	16.1
50°-60°	49.2	8.3
60°-70°	17.2	2.9
70°-80°	1.5	0.3
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°	294.3	49.6
0°-40°	429.5	72.4
0°-60°	574.5	96.8
0°-90°	593.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	593.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	451	452	444	444	444	43
15°	429	416	389	370	363	121
25°	379	349	303	271	261	174
35°	310	265	206	166	152	194
45°	234	180	112	64	45	180
55°	148	97	32	9	8	132
65°	60	29	5	3	2	59
75°	0	1	1	1	1	5
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	454.3	454.3	454.3	454.3	454.3
2.5°	453.0	454.3	450.3	453.6	454.3
5°	451.0	451.7	444.4	444.4	443.8
7.5°	447.7	446.4	434.6	430.0	429.3
10°	443.8	439.2	422.1	412.3	409.0
12.5°	437.9	429.3	406.4	391.9	388.0
15°	429.3	416.2	388.6	370.3	363.0
17.5°	418.8	401.8	368.9	346.6	339.4
20°	406.4	384.7	347.3	322.3	313.1
22.5°	393.2	368.3	325.0	296.7	287.5
25°	378.8	349.3	303.3	271.1	260.6
27.5°	363.7	328.9	279.7	246.2	232.4
30°	346.6	308.5	254.1	219.3	206.1
32.5°	328.2	286.2	231.1	193.7	177.9
35°	309.9	264.6	206.1	166.1	151.6
37.5°	292.1	244.2	181.2	139.2	125.4
40°	273.1	221.9	158.2	114.9	99.1
42.5°	253.4	200.2	134.6	89.9	72.9
45°	233.7	179.9	112.3	64.3	45.3
47.5°	214.0	158.2	90.6	40.7	24.3
50°	191.7	137.2	68.9	21.7	13.8
52.5°	170.7	117.5	49.2	12.5	10.5
55°	147.7	97.2	31.5	9.2	8.5
57.5°	126.0	77.5	17.7	7.2	6.6
60°	103.1	59.7	9.8	5.9	5.3
62.5°	80.1	43.3	6.6	3.9	3.3
65°	59.7	28.9	4.6	2.6	2.0
67.5°	39.4	16.4	3.3	1.3	1.3
70°	21.7	7.9	2.0	1.3	1.3
72.5°	7.9	2.6	1.3	0.7	0.7
75°	0.0	0.7	0.7	0.7	0.7
77.5°	0.0	0.0	0.0	0.0	0.7
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	13.27	14.53	13.63	14.84	15.15	0.00	0.00	0.00	0.00	0.00
	3H	13.55	14.65	13.93	14.98	15.35	0.00	0.00	0.00	0.00	0.00
	4H	13.47	14.50	13.87	14.85	15.23	0.00	0.00	0.00	0.00	0.00
	6H	13.38	14.32	13.80	14.69	15.09	0.00	0.00	0.00	0.00	0.00
	8H	13.34	14.22	13.77	14.62	15.02	0.00	0.00	0.00	0.00	0.00
	12H	13.29	14.14	13.72	14.52	14.95	0.00	0.00	0.00	0.00	0.00
4H	2H	13.04	14.07	13.45	14.42	14.80	0.00	0.00	0.00	0.00	0.00
	3H	13.33	14.15	13.74	14.56	14.96	0.00	0.00	0.00	0.00	0.00
	4H	13.23	13.97	13.67	14.39	14.83	0.00	0.00	0.00	0.00	0.00
	6H	13.15	13.78	13.61	14.22	14.69	0.00	0.00	0.00	0.00	0.00
	8H	13.08	13.67	13.56	14.12	14.59	0.00	0.00	0.00	0.00	0.00
	12H	13.03	13.55	13.52	14.03	14.51	0.00	0.00	0.00	0.00	0.00
8H	4H	13.09	13.67	13.56	14.12	14.59	0.00	0.00	0.00	0.00	0.00
	6H	12.98	13.45	13.48	13.95	14.43	0.00	0.00	0.00	0.00	0.00
	8H	12.91	13.34	13.43	13.85	14.35	0.00	0.00	0.00	0.00	0.00
	12H	12.86	13.24	13.38	13.73	14.31	0.00	0.00	0.00	0.00	0.00
12H	4H	13.03	13.55	13.52	14.03	14.51	0.00	0.00	0.00	0.00	0.00
	6H	12.91	13.34	13.43	13.85	14.35	0.00	0.00	0.00	0.00	0.00
	8H	12.86	13.24	13.38	13.73	14.31	0.00	0.00	0.00	0.00	0.00