

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: P1060942

Luminaire Tested: S124RDR-H575D950-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060942  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H575D950-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

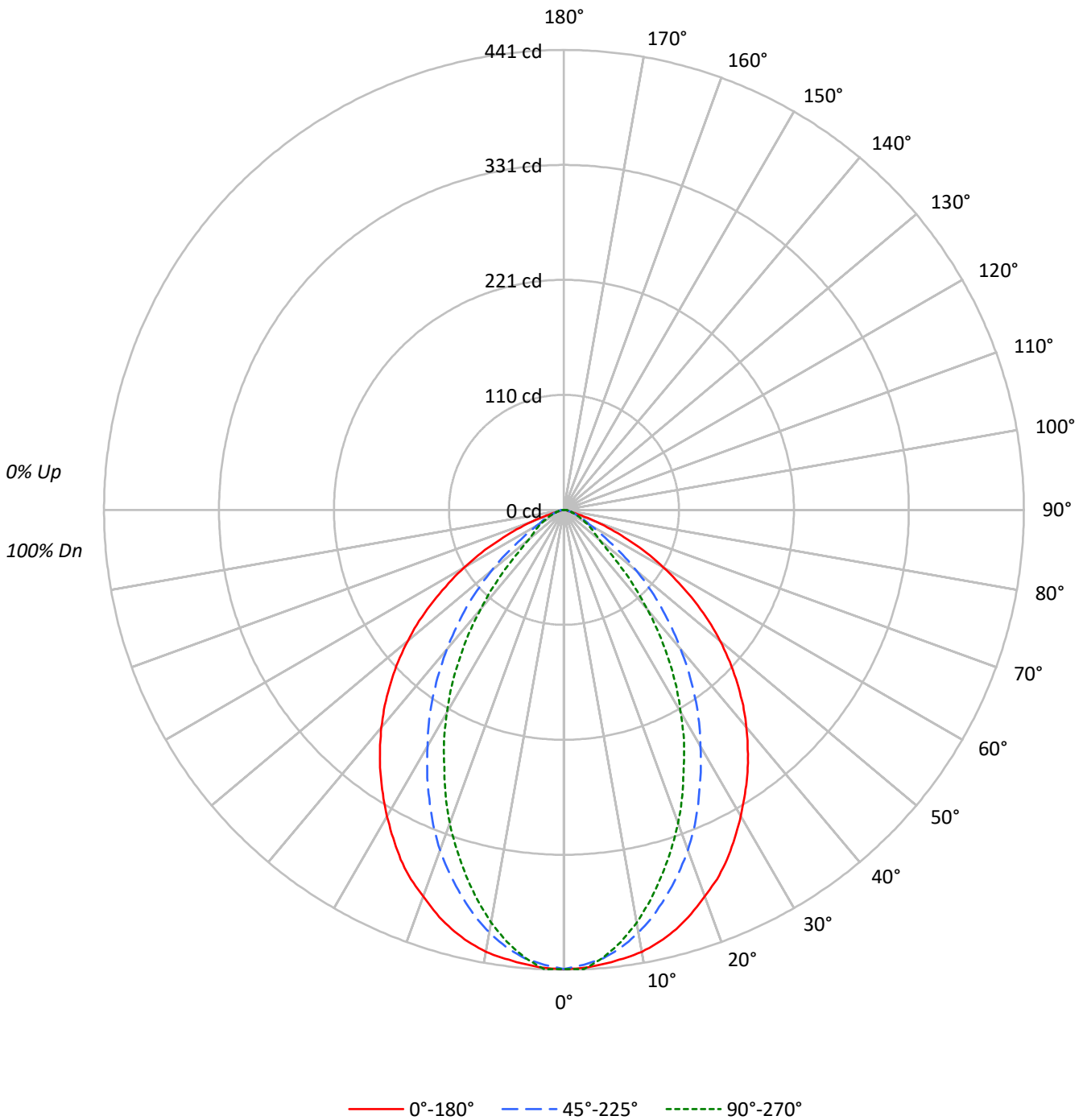
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 649.2 lumens  
Efficiency: N/A  
Efficacy: 37.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
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 (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	
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	101	102	100	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	76	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	3791	3791	3791
5°	3779	3731	3726
10°	3763	3601	3514
15°	3709	3405	3234
20°	3614	3183	2932
25°	3517	2905	2581
30°	3373	2602	2226
35°	3227	2301	1839
40°	3061	1959	1394
45°	2862	1601	936
50°	2618	1212	581
55°	2300	800	494
60°	1901	491	406
65°	1377	379	328
70°	750	282	249
75°	166	206	226
80°	124	154	183
85°	119	119	188

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2862 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.8	6.3
10°-20°	108.4	16.7
20°-30°	143.5	22.1
30°-40°	142.5	21.9
40°-50°	109.6	16.9
50°-60°	65.3	10.1
60°-70°	29.7	4.6
70°-80°	7.7	1.2
80°-90°	1.7	0.3
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°	292.7	45.1
0°-40°	435.1	67.0
0°-60°	610.1	94.0
0°-90°	649.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	649.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	440	440	440	440	440	
5°	437	438	432	432	431	42
15°	416	406	382	369	363	117
25°	370	344	306	280	272	170
35°	307	268	219	185	175	192
45°	235	189	132	92	77	181
55°	153	109	53	34	33	137
65°	68	40	19	16	16	68
75°	5	6	6	7	7	10
85°	1	1	1	2	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	440.3	440.3	440.3	440.3	440.3
2.5°	439.7	440.3	436.6	439.7	440.9
5°	437.2	437.8	431.6	431.6	431.0
7.5°	434.1	432.9	423.0	419.2	418.0
10°	430.4	426.1	411.8	404.3	401.9
12.5°	424.2	417.4	398.1	387.6	383.3
15°	416.1	405.6	382.0	369.0	362.8
17.5°	406.2	393.2	365.3	348.5	341.7
20°	394.4	377.1	347.3	326.2	320.0
22.5°	383.3	361.6	327.4	303.3	296.4
25°	370.2	343.6	305.7	280.3	271.6
27.5°	354.7	326.2	284.0	258.0	249.3
30°	339.2	307.6	261.7	234.4	223.9
32.5°	323.1	288.4	241.2	210.2	200.3
35°	307.0	268.5	218.9	185.4	174.9
37.5°	289.6	248.7	196.6	161.9	150.1
40°	272.3	229.5	174.3	138.9	124.0
42.5°	254.3	209.6	152.6	115.4	100.5
45°	235.0	189.1	131.5	91.8	76.9
47.5°	215.8	169.9	110.4	68.8	55.2
50°	195.4	149.5	90.5	50.2	43.4
52.5°	174.9	129.6	70.7	39.1	37.2
55°	153.2	109.1	53.3	33.5	32.9
57.5°	130.9	90.5	38.5	29.1	27.9
60°	110.4	73.2	28.5	24.8	23.6
62.5°	89.3	55.2	23.6	20.5	19.2
65°	67.6	40.3	18.6	16.1	16.1
67.5°	49.0	27.3	14.9	13.0	12.4
70°	29.8	16.7	11.2	10.5	9.9
72.5°	14.9	9.9	8.7	8.1	8.1
75°	5.0	6.2	6.2	6.8	6.8
77.5°	3.7	4.3	4.3	5.0	5.0
80°	2.5	3.1	3.1	3.7	3.7
82.5°	1.9	1.9	2.5	2.5	3.1
85°	1.2	1.2	1.2	1.9	1.9
87.5°	0.6	0.6	0.6	1.2	1.2
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	13.75	15.08	14.11	15.39	15.71	5.29	6.62	5.65	6.94	7.25
	3H	14.26	15.44	14.64	15.77	16.13	6.11	7.29	6.49	7.62	7.98
	4H	14.22	15.32	14.63	15.67	16.06	6.39	7.49	6.79	7.84	8.22
	6H	14.16	15.17	14.57	15.54	15.93	6.56	7.57	6.98	7.94	8.33
	8H	14.12	15.07	14.55	15.47	15.87	6.63	7.58	7.06	7.97	8.38
	12H	14.08	14.99	14.51	15.38	15.81	6.67	7.59	7.11	7.97	8.40
4H	2H	13.59	14.69	13.99	15.04	15.42	5.73	6.83	6.14	7.18	7.56
	3H	14.14	15.04	14.56	15.44	15.85	6.70	7.59	7.11	7.99	8.40
	4H	14.11	14.91	14.55	15.33	15.77	7.06	7.86	7.50	8.28	8.72
	6H	14.06	14.75	14.52	15.19	15.66	7.31	8.00	7.78	8.45	8.91
	8H	14.01	14.65	14.48	15.10	15.57	7.40	8.04	7.87	8.49	8.96
	12H	13.98	14.54	14.46	15.02	15.50	7.48	8.05	7.97	8.53	9.00
8H	4H	14.00	14.64	14.47	15.09	15.56	7.15	7.79	7.62	8.24	8.71
	6H	13.94	14.46	14.44	14.96	15.44	7.46	7.98	7.96	8.48	8.96
	8H	13.89	14.36	14.42	14.88	15.37	7.59	8.06	8.12	8.58	9.07
	12H	13.86	14.28	14.38	14.77	15.34	7.74	8.15	8.25	8.64	9.22
12H	4H	13.96	14.52	14.45	15.01	15.48	7.12	7.69	7.61	8.17	8.64
	6H	13.89	14.35	14.41	14.87	15.36	7.44	7.91	7.96	8.43	8.92
	8H	13.86	14.27	14.37	14.77	15.34	7.61	8.03	8.13	8.52	9.09