

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: P1060285

Luminaire Tested: S124RDRP-S1020D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060285  
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: S124RDRP-S1020D940-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

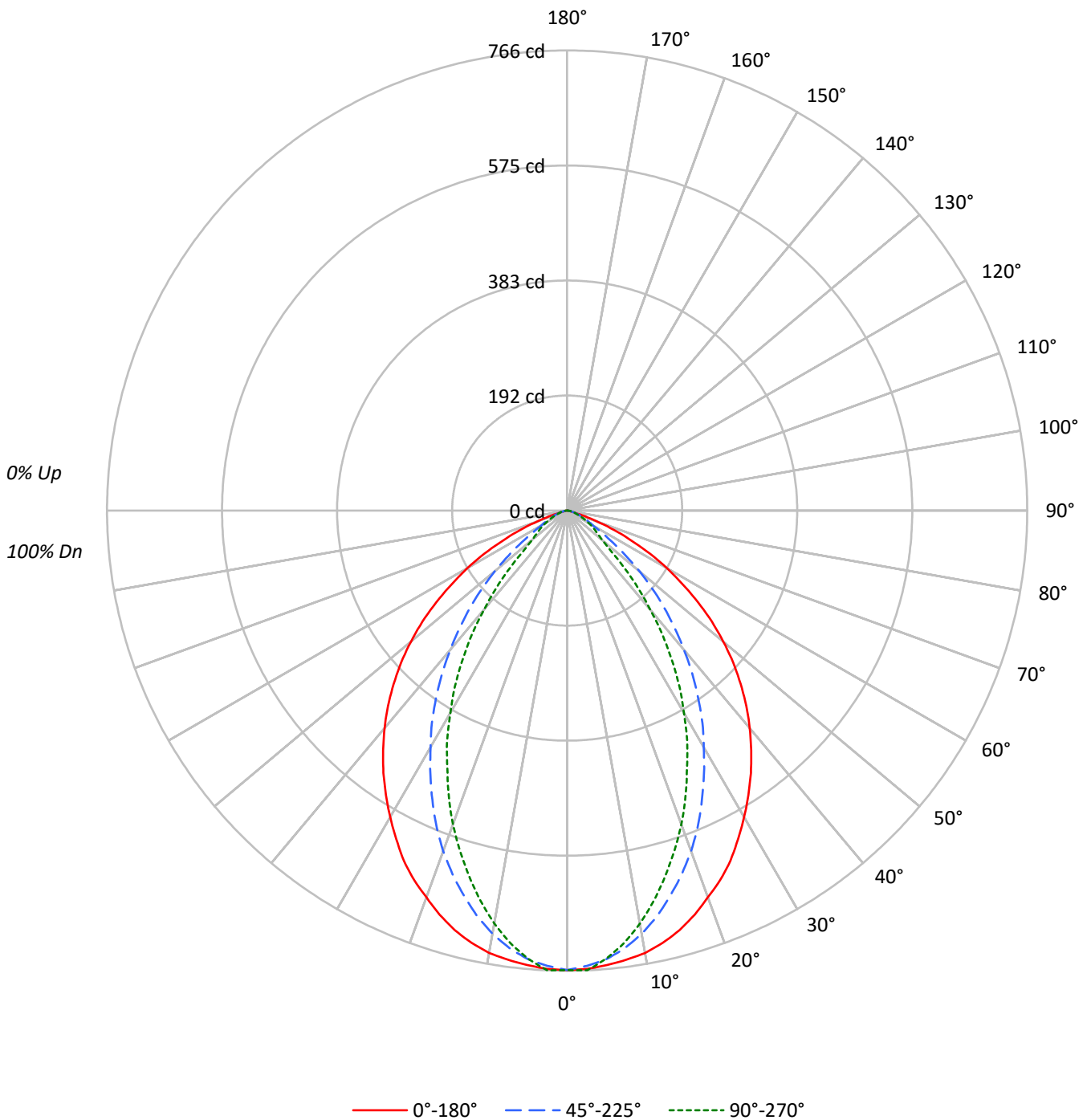
Lumens per Lamp: N/A  
Luminaire Lumens: 1127.8 lumens  
Efficiency: N/A  
Efficacy: 32.2 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71					71			
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63					63			
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57					57			
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51					51			
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47					47			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43					43			
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

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

	0°	45°	90°
0°	6587	6587	6587
5°	6565	6481	6472
10°	6538	6255	6104
15°	6445	5916	5618
20°	6279	5529	5094
25°	6111	5046	4484
30°	5860	4520	3867
35°	5606	3998	3194
40°	5316	3403	2422
45°	4972	2781	1627
50°	4547	2107	1010
55°	3995	1390	857
60°	3303	854	704
65°	2392	658	571
70°	1302	488	433
75°	286	359	396
80°	213	268	322
85°	217	217	316

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4972 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	6.3
10°-20°	188.2	16.7
20°-30°	249.3	22.1
30°-40°	247.5	21.9
40°-50°	190.4	16.9
50°-60°	113.5	10.1
60°-70°	51.6	4.6
70°-80°	13.4	1.2
80°-90°	3.0	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°	508.4	45.1
0°-40°	755.9	67.0
0°-60°	1059.8	94.0
0°-90°	1127.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1127.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	760	761	750	750	749	72
15°	723	705	664	641	630	203
25°	643	597	531	487	472	295
35°	533	466	380	322	304	333
45°	408	329	228	159	134	314
55°	266	190	93	58	57	237
65°	117	70	32	28	28	118
75°	9	11	11	12	12	18
85°	2	2	2	3	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	764.9	764.9	764.9	764.9	764.9
2.5°	763.8	764.9	758.4	763.8	766.0
5°	759.5	760.6	749.8	749.8	748.7
7.5°	754.1	752.0	734.7	728.3	726.1
10°	747.7	740.1	715.3	702.4	698.1
12.5°	736.9	725.0	691.6	673.3	665.8
15°	722.9	704.6	663.6	641.0	630.2
17.5°	705.6	683.0	634.5	605.5	593.6
20°	685.2	655.0	603.3	566.7	555.9
22.5°	665.8	628.1	568.8	526.8	515.0
25°	643.2	596.8	531.1	486.9	471.9
27.5°	616.2	566.7	493.4	448.2	433.1
30°	589.3	534.4	454.6	407.2	388.9
32.5°	561.3	501.0	419.1	365.2	348.0
35°	533.3	466.5	380.3	322.1	303.8
37.5°	503.1	432.0	341.5	281.2	260.7
40°	472.9	398.6	302.7	241.3	215.5
42.5°	441.7	364.1	265.0	200.4	174.5
45°	408.3	328.6	228.4	159.4	133.6
47.5°	374.9	295.2	191.8	119.6	95.9
50°	339.4	259.6	157.3	87.3	75.4
52.5°	303.8	225.2	122.8	67.9	64.6
55°	266.1	189.6	92.6	58.2	57.1
57.5°	227.3	157.3	66.8	50.6	48.5
60°	191.8	127.1	49.6	43.1	40.9
62.5°	155.1	95.9	40.9	35.6	33.4
65°	117.4	70.0	32.3	28.0	28.0
67.5°	85.1	47.4	25.9	22.6	21.5
70°	51.7	29.1	19.4	18.3	17.2
72.5°	25.9	17.2	15.1	14.0	14.0
75°	8.6	10.8	10.8	11.9	11.9
77.5°	6.5	7.5	7.5	8.6	8.6
80°	4.3	5.4	5.4	6.5	6.5
82.5°	3.2	3.2	4.3	4.3	5.4
85°	2.2	2.2	2.2	3.2	3.2
87.5°	1.1	1.1	1.1	2.2	2.2
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	15.67	17.00	16.03	17.32	17.63	7.21	8.55	7.58	8.86	9.18
	3H	16.18	17.36	16.56	17.69	18.05	8.03	9.21	8.41	9.54	9.90
	4H	16.14	17.24	16.55	17.59	17.98	8.31	9.41	8.72	9.76	10.15
	6H	16.08	17.09	16.49	17.46	17.85	8.49	9.49	8.90	9.86	10.26
	8H	16.04	16.99	16.47	17.39	17.79	8.55	9.51	8.98	9.90	10.30
	12H	16.00	16.91	16.43	17.30	17.73	8.60	9.51	9.03	9.89	10.32
4H	2H	15.51	16.61	15.91	16.96	17.34	7.66	8.75	8.06	9.10	9.49
	3H	16.06	16.96	16.48	17.36	17.77	8.62	9.51	9.03	9.92	10.32
	4H	16.03	16.83	16.47	17.25	17.69	8.99	9.78	9.42	10.20	10.64
	6H	15.98	16.67	16.44	17.11	17.58	9.24	9.92	9.70	10.37	10.84
	8H	15.93	16.57	16.40	17.02	17.49	9.33	9.97	9.80	10.41	10.88
	12H	15.90	16.46	16.38	16.94	17.42	9.40	9.97	9.89	10.45	10.92
8H	4H	15.92	16.56	16.39	17.01	17.48	9.07	9.71	9.54	10.16	10.63
	6H	15.86	16.38	16.36	16.88	17.36	9.39	9.91	9.89	10.40	10.89
	8H	15.81	16.28	16.34	16.80	17.29	9.52	9.99	10.04	10.50	10.99
	12H	15.78	16.20	16.30	16.69	17.26	9.65	10.07	10.17	10.56	11.13
12H	4H	15.88	16.44	16.37	16.93	17.40	9.05	9.61	9.53	10.10	10.57
	6H	15.81	16.27	16.33	16.79	17.28	9.37	9.83	9.89	10.35	10.84
	8H	15.78	16.19	16.29	16.69	17.26	9.54	9.95	10.05	10.45	11.02