

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: P1060662

Luminaire Tested: S124RDR-H1020D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060662  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D927-X4F0-XX-UDD-BVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

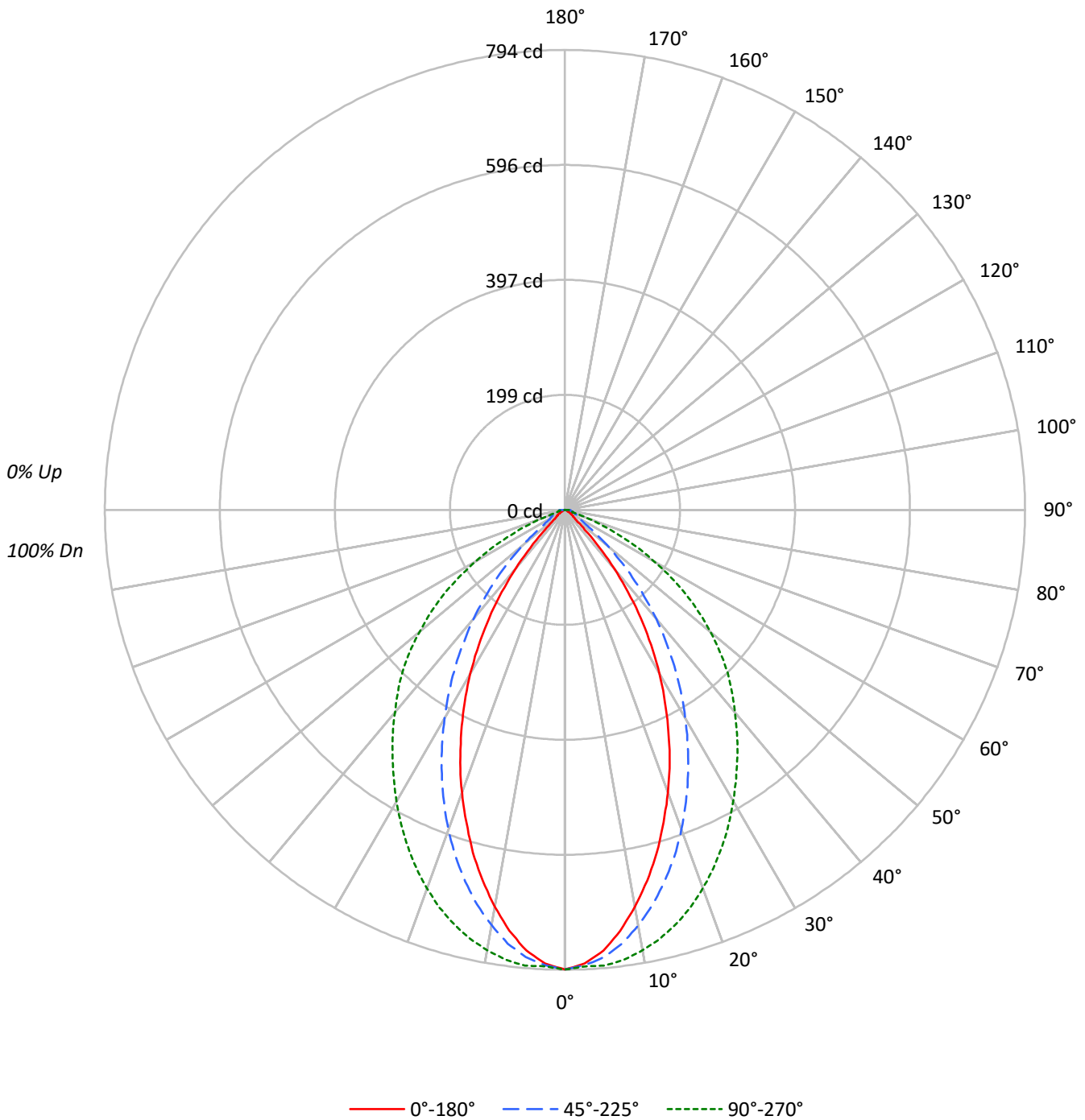
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1000.0 lumens  
Efficiency: N/A  
Efficacy: 32.1 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	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	98	98	96	95	95	93	92	90				
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				

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

	0°	45°	90°
0°	6833	6833	6833
5°	6601	6698	6827
10°	6083	6368	6751
15°	5463	5919	6601
20°	4762	5386	6375
25°	4017	4778	6097
30°	3242	4130	5778
35°	2399	3456	5453
40°	1486	2753	5129
45°	589	2007	4831
50°	263	1261	4391
55°	210	658	3845
60°	145	498	3064
65°	96	493	2107
70°	93	446	984
75°	123	433	433
80°	183	506	506
85°	366	1008	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4831 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.8	7.3
10°-20°	187.9	18.8
20°-30°	237.1	23.7
30°-40°	217.5	21.8
40°-50°	148.2	14.8
50°-60°	80.7	8.1
60°-70°	34.9	3.5
70°-80°	12.7	1.3
80°-90°	8.2	0.8
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°	497.8	49.8
0°-40°	715.3	71.5
0°-60°	944.2	94.4
0°-90°	1000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	764	774	775	783	790	71
15°	613	634	664	712	740	170
25°	423	453	503	583	642	193
35°	228	262	329	433	519	141
45°	48	81	165	292	397	45
55°	14	15	44	161	256	12
65°	5	6	24	50	103	5
75°	4	12	13	13	13	4
85°	4	8	10	10	8	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	793.5	793.5	793.5	793.5	793.5
2.5°	784.2	793.5	787.0	788.8	788.8
5°	763.7	773.9	774.9	783.2	789.8
7.5°	732.9	747.8	755.3	772.1	783.2
10°	695.7	713.4	728.3	757.2	772.1
12.5°	655.6	676.1	698.5	736.7	758.1
15°	612.8	634.2	664.0	711.5	740.4
17.5°	565.3	591.4	627.7	684.5	719.9
20°	519.7	545.8	587.7	651.9	695.7
22.5°	472.2	499.2	545.8	617.5	669.6
25°	422.8	452.6	502.9	583.0	641.7
27.5°	374.4	406.1	459.1	546.7	611.9
30°	326.0	357.6	415.4	509.4	581.1
32.5°	276.6	309.2	371.6	470.3	549.5
35°	228.2	261.7	328.8	433.1	518.7
37.5°	178.8	214.2	285.9	396.7	488.0
40°	132.2	167.6	244.9	360.4	456.3
42.5°	88.5	123.9	203.0	325.0	426.5
45°	48.4	81.0	164.8	292.4	396.7
47.5°	26.1	44.7	127.6	260.8	363.2
50°	19.6	24.2	94.1	227.2	327.8
52.5°	16.8	18.6	65.2	191.9	292.4
55°	14.0	14.9	43.8	161.1	256.1
57.5°	11.2	12.1	32.6	130.4	217.0
60°	8.4	10.2	28.9	100.6	177.9
62.5°	6.5	8.4	27.0	73.6	140.6
65°	4.7	6.5	24.2	50.3	103.4
67.5°	4.7	7.5	20.5	32.6	69.8
70°	3.7	10.2	17.7	21.4	39.1
72.5°	3.7	11.2	14.9	14.9	14.9
75°	3.7	12.1	13.0	13.0	13.0
77.5°	3.7	11.2	12.1	11.2	11.2
80°	3.7	10.2	10.2	10.2	10.2
82.5°	3.7	9.3	10.2	10.2	8.4
85°	3.7	8.4	10.2	10.2	7.5
87.5°	2.8	8.4	9.3	9.3	5.6
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	0.00	0.00	0.00	0.00	0.00	15.09	16.36	15.45	16.68	16.99
	3H	0.00	0.28	0.00	0.61	0.97	15.46	16.59	15.84	16.92	17.29
	4H	0.36	1.41	0.76	1.76	2.15	15.44	16.49	15.84	16.84	17.23
	6H	1.53	2.50	1.95	2.87	3.26	15.43	16.39	15.84	16.76	17.16
	8H	2.12	3.03	2.55	3.43	3.83	15.43	16.34	15.86	16.73	17.14
	12H	2.79	3.66	3.22	4.04	4.47	15.44	16.31	15.87	16.70	17.13
4H	2H	1.33	2.38	1.73	2.73	3.11	14.90	15.95	15.30	16.30	16.68
	3H	2.91	3.77	3.33	4.18	4.58	15.32	16.17	15.73	16.58	16.98
	4H	4.20	4.97	4.64	5.39	5.84	15.31	16.08	15.75	16.50	16.95
	6H	5.33	5.99	5.79	6.44	6.91	15.35	16.02	15.82	16.46	16.93
	8H	5.84	6.45	6.31	6.90	7.37	15.38	16.00	15.85	16.45	16.92
	12H	6.38	6.93	6.87	7.41	7.89	15.45	15.99	15.93	16.48	16.95
8H	4H	5.29	5.91	5.76	6.35	6.83	15.22	15.84	15.69	16.29	16.76
	6H	6.83	7.33	7.33	7.83	8.31	15.30	15.81	15.81	16.30	16.79
	8H	7.63	8.09	8.16	8.60	9.10	15.38	15.84	15.91	16.36	16.85
	12H	8.47	8.87	8.98	9.36	9.93	15.55	15.96	16.07	16.45	17.02
12H	4H	5.48	6.02	5.96	6.51	6.98	15.19	15.73	15.67	16.22	16.69
	6H	7.18	7.63	7.70	8.15	8.64	15.27	15.73	15.80	16.25	16.74
	8H	8.19	8.59	8.71	9.09	9.66	15.41	15.81	15.93	16.31	16.88