

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: P1060783

Luminaire Tested: S124RDR-H1195D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060783  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1195D950-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

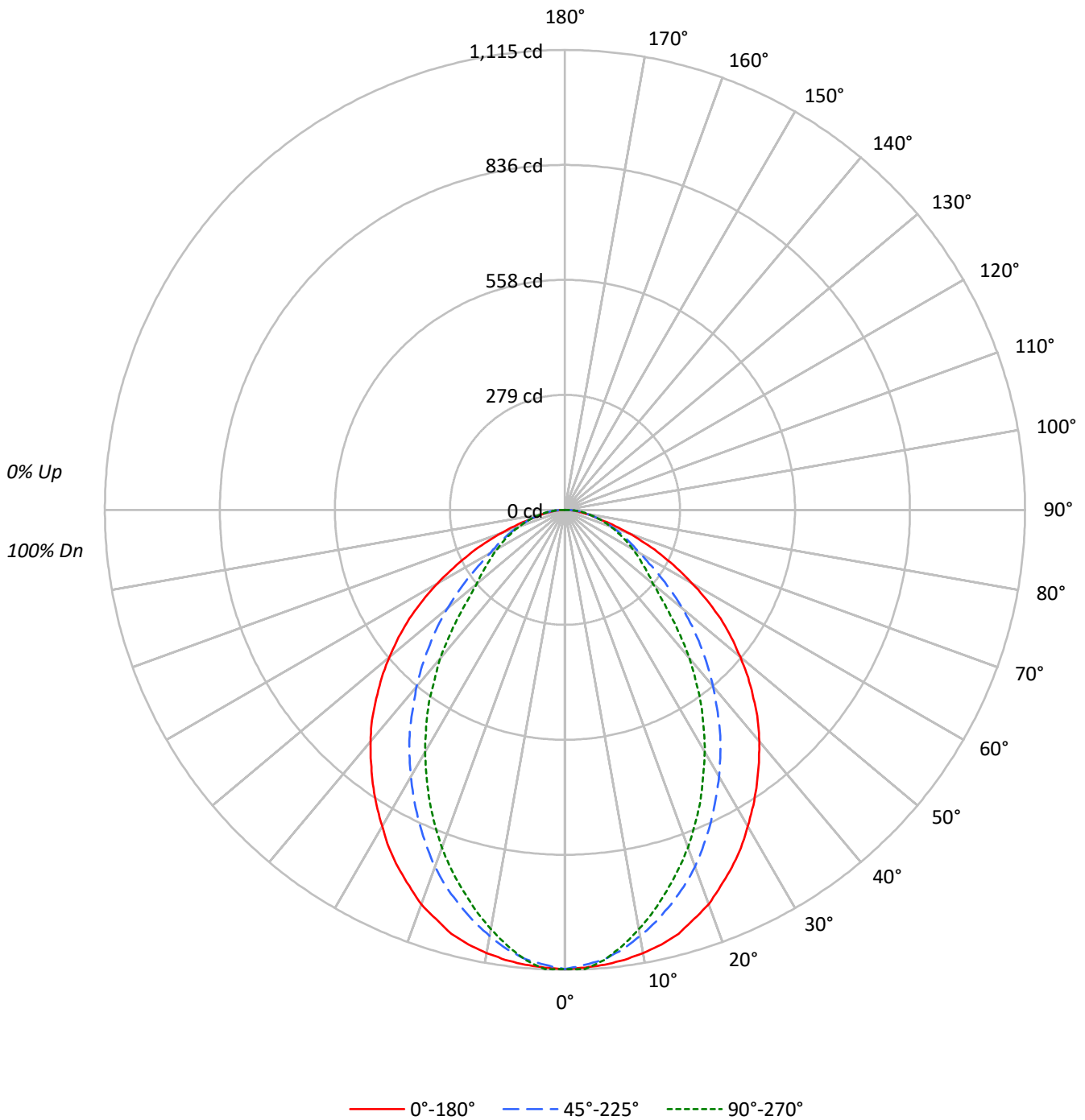
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2147.1 lumens  
Efficiency: N/A  
Efficacy: 58.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.5  
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									
RC	80									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				100															
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86				86															
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74				74															
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64				64															
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50															
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				44															
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				40															
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				36															
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33				33															
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30				30															

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

	0°	45°	90°
0°	9588	9588	9588
5°	9569	9456	9467
10°	9542	9176	9027
15°	9484	8830	8516
20°	9329	8442	7985
25°	9088	7944	7384
30°	8808	7429	6740
35°	8529	6891	6052
40°	8236	6280	5280
45°	7872	5641	4413
50°	7432	4978	3734
55°	6915	4223	3458
60°	6129	3582	3267
65°	5226	3307	3093
70°	4086	3064	2933
75°	2785	2831	2831
80°	2400	2658	2727
85°	2065	2589	2845

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7872 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.6	4.8
10°-20°	281.3	13.1
20°-30°	390.6	18.2
30°-40°	418.7	19.5
40°-50°	370.9	17.3
50°-60°	279.5	13.0
60°-70°	181.0	8.4
70°-80°	92.9	4.3
80°-90°	28.5	1.3
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°	775.5	36.1
0°-40°	1194.2	55.6
0°-60°	1844.7	85.9
0°-90°	2147.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2147.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1107	1108	1094	1095	1095	105
15°	1064	1040	990	966	955	299
25°	956	906	836	792	777	440
35°	811	738	656	597	576	507
45°	646	563	463	391	362	498
55°	461	383	281	237	230	409
65°	256	207	162	153	152	254
75°	84	88	85	85	85	99
85°	21	22	26	29	29	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1113.5	1113.5	1113.5	1113.5	1113.5
2.5°	1110.9	1114.8	1104.4	1112.2	1114.8
5°	1107.0	1108.3	1093.9	1095.2	1095.2
7.5°	1100.4	1097.8	1074.3	1067.7	1066.4
10°	1091.3	1083.4	1049.4	1036.3	1032.4
12.5°	1079.5	1065.1	1021.9	1003.6	995.8
15°	1063.8	1040.2	990.5	965.7	955.2
17.5°	1040.2	1010.1	957.8	926.4	914.6
20°	1018.0	977.4	921.2	881.9	871.4
22.5°	986.6	943.4	879.3	837.4	824.3
25°	956.5	905.5	836.1	791.6	777.2
27.5°	923.8	866.2	791.6	744.5	726.2
30°	885.8	824.3	747.1	697.4	677.8
32.5°	849.2	783.8	701.3	646.4	625.5
35°	811.3	738.0	655.5	596.7	575.7
37.5°	772.0	694.8	604.5	546.9	519.5
40°	732.7	651.6	558.7	493.3	469.7
42.5°	692.2	607.1	511.6	443.6	413.5
45°	646.4	562.6	463.2	391.2	362.4
47.5°	601.9	519.5	418.7	340.2	314.0
50°	554.8	473.7	371.6	295.7	278.7
52.5°	507.7	426.6	325.8	261.7	253.8
55°	460.6	383.4	281.3	236.8	230.3
57.5°	408.2	338.9	242.1	214.6	209.4
60°	355.9	290.5	208.0	193.7	189.7
62.5°	304.9	248.6	184.5	172.7	170.1
65°	256.5	206.7	162.3	153.1	151.8
67.5°	209.4	170.1	141.3	136.1	133.5
70°	162.3	136.1	121.7	119.1	116.5
72.5°	120.4	109.9	103.4	102.1	100.8
75°	83.7	87.7	85.1	85.1	85.1
77.5°	66.7	68.0	69.3	70.7	69.3
80°	48.4	52.3	53.6	56.3	55.0
82.5°	34.0	36.6	40.6	41.9	43.2
85°	20.9	22.2	26.2	28.8	28.8
87.5°	9.2	10.5	13.1	15.7	17.0
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	18.29	19.79	18.66	20.11	20.42	14.86	16.36	15.22	16.67	16.98
	3H	19.50	20.84	19.88	21.17	21.53	16.55	17.90	16.93	18.23	18.59
	4H	19.80	21.06	20.20	21.41	21.79	17.23	18.49	17.63	18.84	19.22
	6H	20.01	21.17	20.42	21.54	21.93	17.78	18.94	18.19	19.31	19.70
	8H	20.07	21.17	20.49	21.56	21.96	18.00	19.11	18.43	19.50	19.90
	12H	20.10	21.16	20.53	21.54	21.97	18.17	19.23	18.60	19.61	20.04
4H	2H	18.43	19.69	18.83	20.04	20.42	15.52	16.78	15.92	17.13	17.51
	3H	19.84	20.88	20.25	21.28	21.68	17.43	18.47	17.84	18.87	19.28
	4H	20.26	21.20	20.70	21.62	22.06	18.23	19.17	18.66	19.59	20.03
	6H	20.59	21.41	21.05	21.85	22.31	18.92	19.74	19.38	20.18	20.64
	8H	20.69	21.45	21.15	21.89	22.36	19.19	19.96	19.66	20.40	20.87
	12H	20.76	21.44	21.24	21.92	22.39	19.42	20.11	19.91	20.58	21.06
8H	4H	20.39	21.16	20.85	21.60	22.07	18.55	19.31	19.01	19.76	20.22
	6H	20.81	21.44	21.31	21.94	22.41	19.38	20.01	19.87	20.50	20.98
	8H	20.97	21.54	21.48	22.05	22.53	19.74	20.31	20.26	20.82	21.31
	12H	21.10	21.60	21.61	22.09	22.66	20.08	20.58	20.59	21.07	21.64
12H	4H	20.40	21.08	20.88	21.56	22.03	18.58	19.26	19.06	19.74	20.21
	6H	20.84	21.40	21.35	21.91	22.40	19.44	20.00	19.95	20.51	21.00
	8H	21.05	21.55	21.56	22.04	22.60	19.87	20.37	20.38	20.86	21.43