

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: P1060242

Luminaire Tested: S124RDRP-S1020D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060242  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S1020D840-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

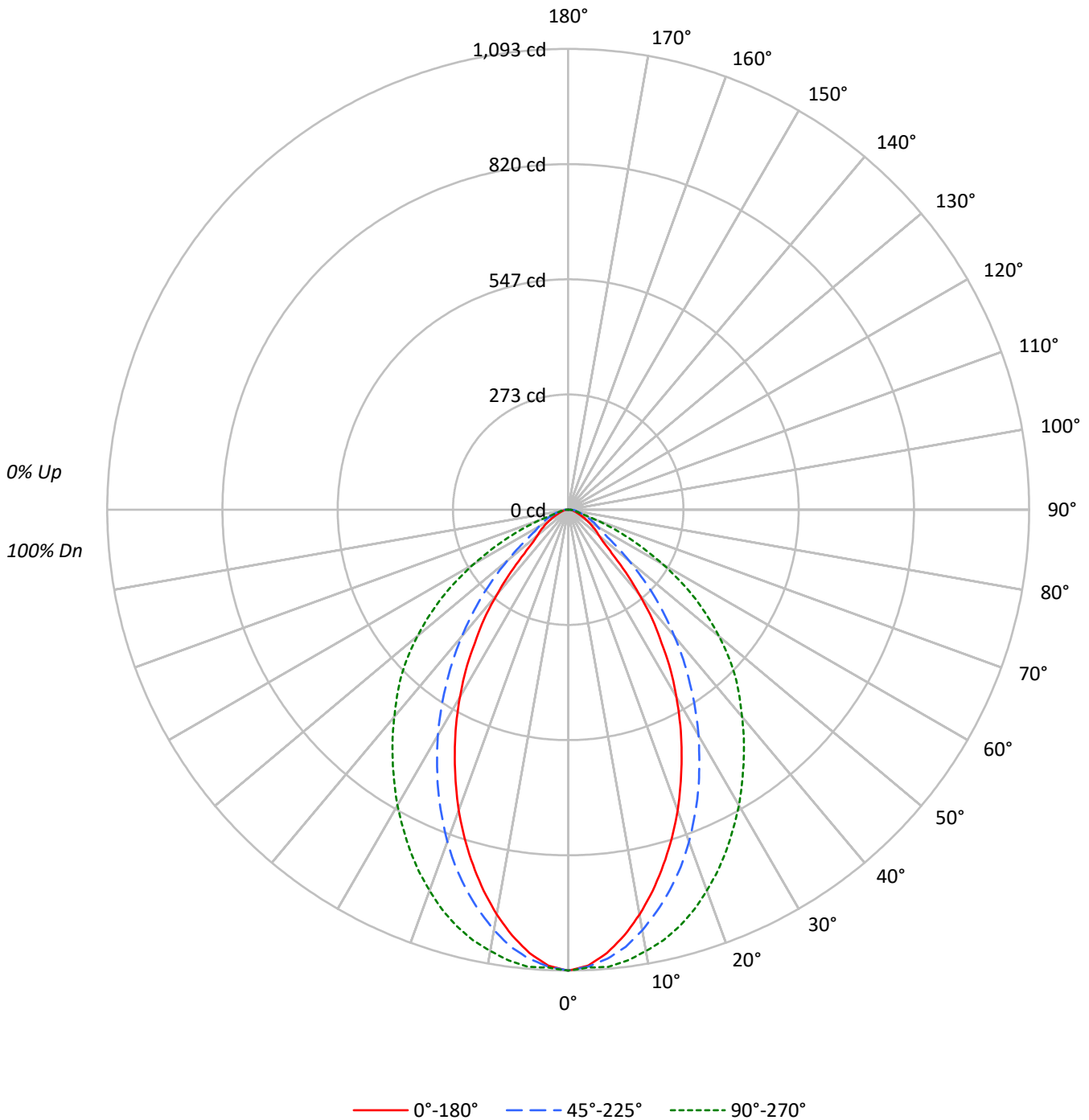
Lumens per Lamp: N/A  
Luminaire Lumens: 1547.2 lumens  
Efficiency: N/A  
Efficacy: 44.2 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

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	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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																												
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79																												
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70																												
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63																												
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57																												
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51																												
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47																												
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																												
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39																												
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36																												

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

	0°	45°	90°
0°	9413	9413	9413
5°	9122	9238	9407
10°	8523	8853	9291
15°	7775	8318	9114
20°	6951	7678	8808
25°	6046	6940	8449
30°	5101	6145	8052
35°	4058	5290	7627
40°	2952	4408	7208
45°	1785	3480	6827
50°	1277	2520	6251
55°	1082	1705	5519
60°	884	1388	4459
65°	697	1245	3211
70°	584	1045	1692
75°	529	975	852
80°	545	967	848
85°	721	1452	968

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6827 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.6	6.5
10°-20°	263.7	17.0
20°-30°	342.0	22.1
30°-40°	329.2	21.3
40°-50°	244.9	15.8
50°-60°	150.6	9.7
60°-70°	74.0	4.8
70°-80°	28.8	1.9
80°-90°	13.2	0.9
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°	706.4	45.7
0°-40°	1035.6	66.9
0°-60°	1431.2	92.5
0°-90°	1547.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1547.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1055	1071	1069	1078	1088	98
15°	872	900	933	989	1022	244
25°	636	670	730	822	889	291
35°	386	423	503	629	726	241
45°	147	182	286	441	561	122
55°	72	74	114	259	368	65
65°	34	37	61	98	158	35
75°	16	28	29	27	26	17
85°	7	13	15	15	10	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1093.1	1093.1	1093.1	1093.1	1093.1
2.5°	1082.2	1094.4	1084.6	1085.8	1087.0
5°	1055.3	1071.2	1068.7	1078.5	1088.3
7.5°	1018.6	1037.0	1045.5	1065.1	1078.5
10°	974.7	995.4	1012.5	1044.3	1062.6
12.5°	925.8	950.2	974.7	1017.4	1045.5
15°	872.1	900.2	933.1	989.3	1022.3
17.5°	817.1	845.2	887.9	952.7	994.2
20°	758.5	789.0	837.9	909.9	961.2
22.5°	697.4	730.4	784.1	866.0	927.0
25°	636.3	670.5	730.4	822.0	889.2
27.5°	575.3	608.3	673.0	775.6	848.9
30°	513.0	547.2	618.0	725.5	809.8
32.5°	453.1	484.9	560.6	677.9	767.0
35°	386.0	422.6	503.2	629.0	725.5
37.5°	328.6	361.5	448.2	580.2	684.0
40°	262.6	299.2	392.1	532.5	641.2
42.5°	201.5	238.2	338.3	484.9	600.9
45°	146.6	182.0	285.8	440.9	560.6
47.5°	111.1	131.9	234.5	398.2	515.4
50°	95.3	101.4	188.1	351.8	466.6
52.5°	84.3	86.7	146.6	305.3	417.7
55°	72.1	74.5	113.6	258.9	367.6
57.5°	61.1	62.3	91.6	215.0	313.9
60°	51.3	52.5	80.6	172.2	258.9
62.5°	42.7	44.0	72.1	133.1	206.4
65°	34.2	36.6	61.1	97.7	157.6
67.5°	28.1	33.0	51.3	68.4	109.9
70°	23.2	31.8	41.5	47.6	67.2
72.5°	19.5	29.3	35.4	34.2	33.0
75°	15.9	28.1	29.3	26.9	25.6
77.5°	13.4	24.4	24.4	22.0	20.8
80°	11.0	19.5	19.5	19.5	17.1
82.5°	9.8	15.9	17.1	17.1	13.4
85°	7.3	13.4	14.7	14.7	9.8
87.5°	4.9	12.2	13.4	12.2	7.3
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	7.58	8.92	7.94	9.23	9.55	16.74	18.09	17.11	18.40	18.71
	3H	8.69	9.88	9.07	10.21	10.57	17.25	18.44	17.63	18.77	19.14
	4H	9.20	10.32	9.61	10.67	11.05	17.27	18.38	17.67	18.73	19.11
	6H	9.64	10.66	10.05	11.03	11.42	17.28	18.30	17.70	18.67	19.07
	8H	9.83	10.80	10.26	11.19	11.59	17.28	18.25	17.71	18.64	19.05
	12H	10.01	10.93	10.44	11.32	11.75	17.29	18.21	17.72	18.59	19.02
4H	2H	8.72	9.83	9.12	10.18	10.57	16.64	17.75	17.04	18.10	18.48
	3H	10.06	10.97	10.48	11.38	11.78	17.22	18.13	17.64	18.54	18.94
	4H	10.80	11.61	11.23	12.03	12.47	17.28	18.10	17.72	18.52	18.96
	6H	11.40	12.11	11.87	12.55	13.02	17.36	18.06	17.82	18.51	18.97
	8H	11.65	12.30	12.12	12.75	13.22	17.39	18.04	17.86	18.49	18.96
	12H	11.88	12.46	12.37	12.95	13.42	17.43	18.01	17.92	18.49	18.97
8H	4H	11.26	11.92	11.73	12.37	12.84	17.24	17.90	17.71	18.34	18.81
	6H	12.11	12.65	12.61	13.14	13.62	17.37	17.91	17.87	18.40	18.88
	8H	12.52	13.00	13.04	13.52	14.01	17.45	17.93	17.97	18.45	18.94
	12H	12.94	13.37	13.45	13.86	14.43	17.57	18.00	18.09	18.49	19.07
12H	4H	11.32	11.90	11.80	12.38	12.85	17.21	17.79	17.70	18.28	18.75
	6H	12.24	12.73	12.76	13.24	13.73	17.35	17.83	17.87	18.35	18.84
	8H	12.77	13.19	13.28	13.69	14.26	17.48	17.91	18.00	18.41	18.98