

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: P1060234

Luminaire Tested: S124RDRP-S1020D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060234  
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: S124RDRP-S1020D835-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

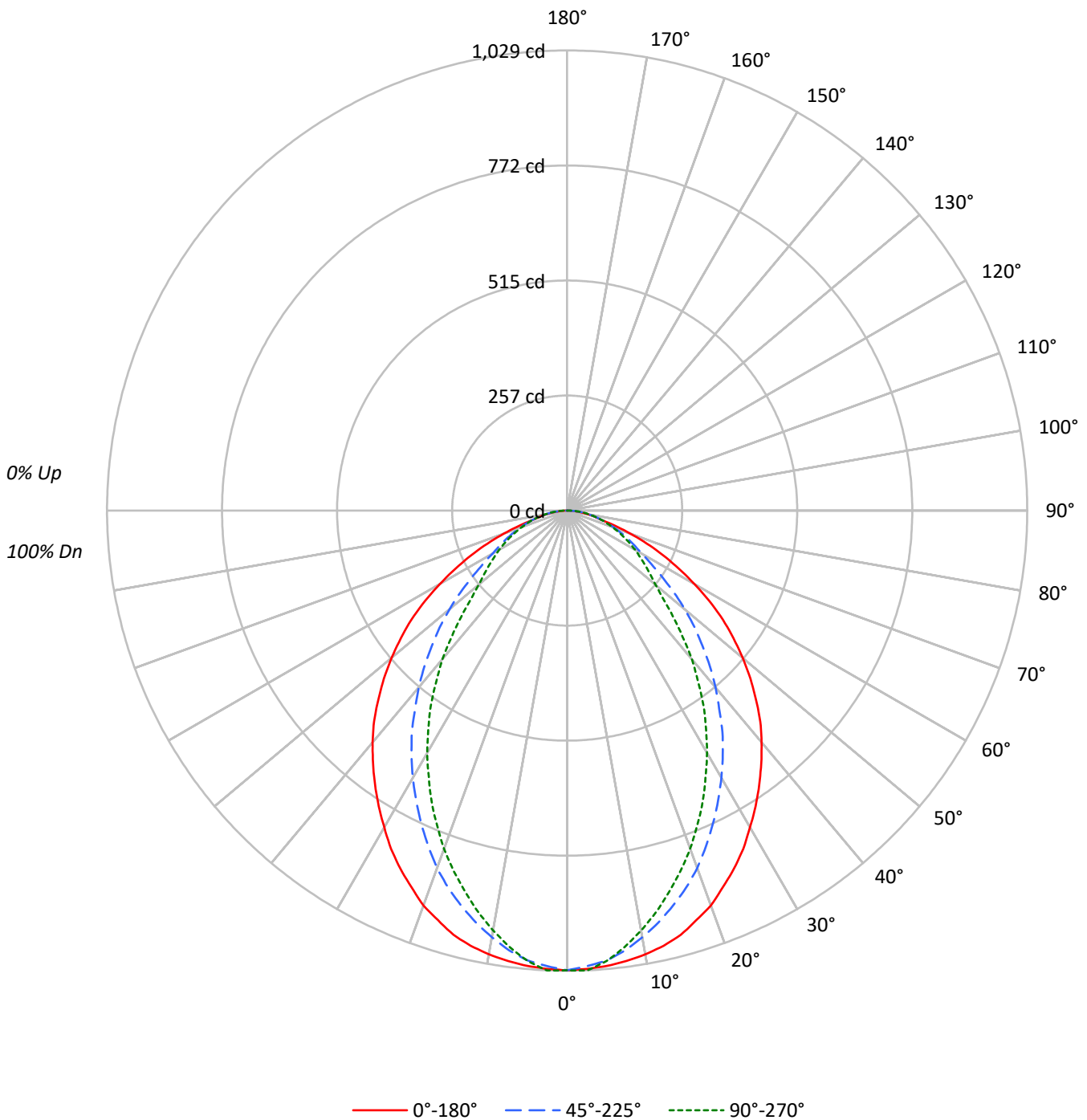
Lumens per Lamp: N/A  
Luminaire Lumens: 1982.5 lumens  
Efficiency: N/A  
Efficacy: 56.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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	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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86																												
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74																												
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64																												
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44																												
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40																												
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36																												
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33																												
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30																												

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

	0°	45°	90°
0°	8853	8853	8853
5°	8835	8730	8741
10°	8810	8472	8335
15°	8756	8154	7863
20°	8613	7794	7373
25°	8392	7335	6818
30°	8133	6860	6223
35°	7875	6363	5588
40°	7606	5799	4875
45°	7268	5209	4076
50°	6863	4596	3447
55°	6385	3900	3192
60°	5659	3308	3017
65°	4825	3052	2855
70°	3772	2830	2707
75°	2572	2612	2612
80°	2217	2455	2514
85°	1907	2391	2628

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7268 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.7	4.8
10°-20°	259.8	13.1
20°-30°	360.6	18.2
30°-40°	386.6	19.5
40°-50°	342.5	17.3
50°-60°	258.1	13.0
60°-70°	167.1	8.4
70°-80°	85.7	4.3
80°-90°	26.3	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°	716.1	36.1
0°-40°	1102.7	55.6
0°-60°	1703.3	85.9
0°-90°	1982.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1982.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	1022	1023	1010	1011	1011	97
15°	982	960	915	892	882	276
25°	883	836	772	731	718	406
35°	749	681	605	551	532	468
45°	597	520	428	361	335	460
55°	425	354	260	219	213	378
65°	237	191	150	141	140	235
75°	77	81	78	78	78	91
85°	19	20	24	27	27	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1028.1	1028.1	1028.1	1028.1	1028.1
2.5°	1025.7	1029.4	1019.7	1026.9	1029.4
5°	1022.1	1023.3	1010.0	1011.2	1011.2
7.5°	1016.1	1013.6	991.9	985.9	984.6
10°	1007.6	1000.4	968.9	956.9	953.2
12.5°	996.7	983.4	943.6	926.7	919.4
15°	982.2	960.5	914.6	891.6	882.0
17.5°	960.5	932.7	884.4	855.4	844.5
20°	939.9	902.5	850.5	814.3	804.6
22.5°	911.0	871.1	811.9	773.2	761.1
25°	883.2	836.0	772.0	730.9	717.6
27.5°	853.0	799.8	730.9	687.4	670.5
30°	817.9	761.1	689.9	643.9	625.8
32.5°	784.1	723.7	647.6	596.8	577.5
35°	749.1	681.4	605.3	550.9	531.6
37.5°	712.8	641.5	558.2	505.0	479.6
40°	676.6	601.7	515.9	455.5	433.7
42.5°	639.1	560.6	472.4	409.6	381.8
45°	596.8	519.5	427.7	361.2	334.7
47.5°	555.8	479.6	386.6	314.1	290.0
50°	512.3	437.4	343.1	273.0	257.3
52.5°	468.8	393.9	300.8	241.6	234.4
55°	425.3	354.0	259.8	218.7	212.6
57.5°	376.9	312.9	223.5	198.1	193.3
60°	328.6	268.2	192.1	178.8	175.2
62.5°	281.5	229.6	170.4	159.5	157.1
65°	236.8	190.9	149.8	141.4	140.1
67.5°	193.3	157.1	130.5	125.6	123.2
70°	149.8	125.6	112.4	109.9	107.5
72.5°	111.2	101.5	95.4	94.2	93.0
75°	77.3	80.9	78.5	78.5	78.5
77.5°	61.6	62.8	64.0	65.2	64.0
80°	44.7	48.3	49.5	52.0	50.7
82.5°	31.4	33.8	37.5	38.7	39.9
85°	19.3	20.5	24.2	26.6	26.6
87.5°	8.5	9.7	12.1	14.5	15.7
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	18.02	19.51	18.38	19.83	20.14	14.58	16.08	14.94	16.39	16.71
	3H	19.22	20.56	19.60	20.89	21.25	16.27	17.62	16.65	17.95	18.31
	4H	19.53	20.79	19.93	21.14	21.51	16.95	18.21	17.35	18.56	18.94
	6H	19.73	20.89	20.14	21.26	21.65	17.50	18.66	17.91	19.03	19.42
	8H	19.79	20.89	20.21	21.28	21.69	17.72	18.83	18.15	19.22	19.62
	12H	19.82	20.88	20.25	21.26	21.69	17.89	18.95	18.32	19.33	19.76
4H	2H	18.16	19.42	18.56	19.77	20.14	15.24	16.50	15.64	16.85	17.23
	3H	19.56	20.60	19.97	21.00	21.41	17.15	18.19	17.56	18.59	19.00
	4H	19.99	20.93	20.42	21.34	21.78	17.95	18.89	18.38	19.31	19.75
	6H	20.31	21.13	20.77	21.57	22.03	18.64	19.46	19.10	19.90	20.36
	8H	20.41	21.17	20.87	21.62	22.08	18.91	19.68	19.38	20.12	20.59
	12H	20.48	21.16	20.96	21.64	22.11	19.14	19.83	19.63	20.30	20.78
8H	4H	20.11	20.88	20.58	21.32	21.79	18.27	19.03	18.73	19.48	19.94
	6H	20.53	21.17	21.03	21.66	22.13	19.10	19.73	19.59	20.22	20.70
	8H	20.69	21.26	21.21	21.77	22.26	19.46	20.03	19.98	20.54	21.03
	12H	20.82	21.32	21.33	21.81	22.38	19.80	20.30	20.31	20.79	21.36
12H	4H	20.12	20.80	20.60	21.28	21.75	18.30	18.98	18.78	19.46	19.93
	6H	20.56	21.13	21.07	21.64	22.13	19.16	19.72	19.67	20.23	20.72
	8H	20.77	21.27	21.28	21.76	22.33	19.59	20.09	20.10	20.58	21.15