

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: P1059411

Luminaire Tested: S123RDRP-H1000D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059411  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H1000D830-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

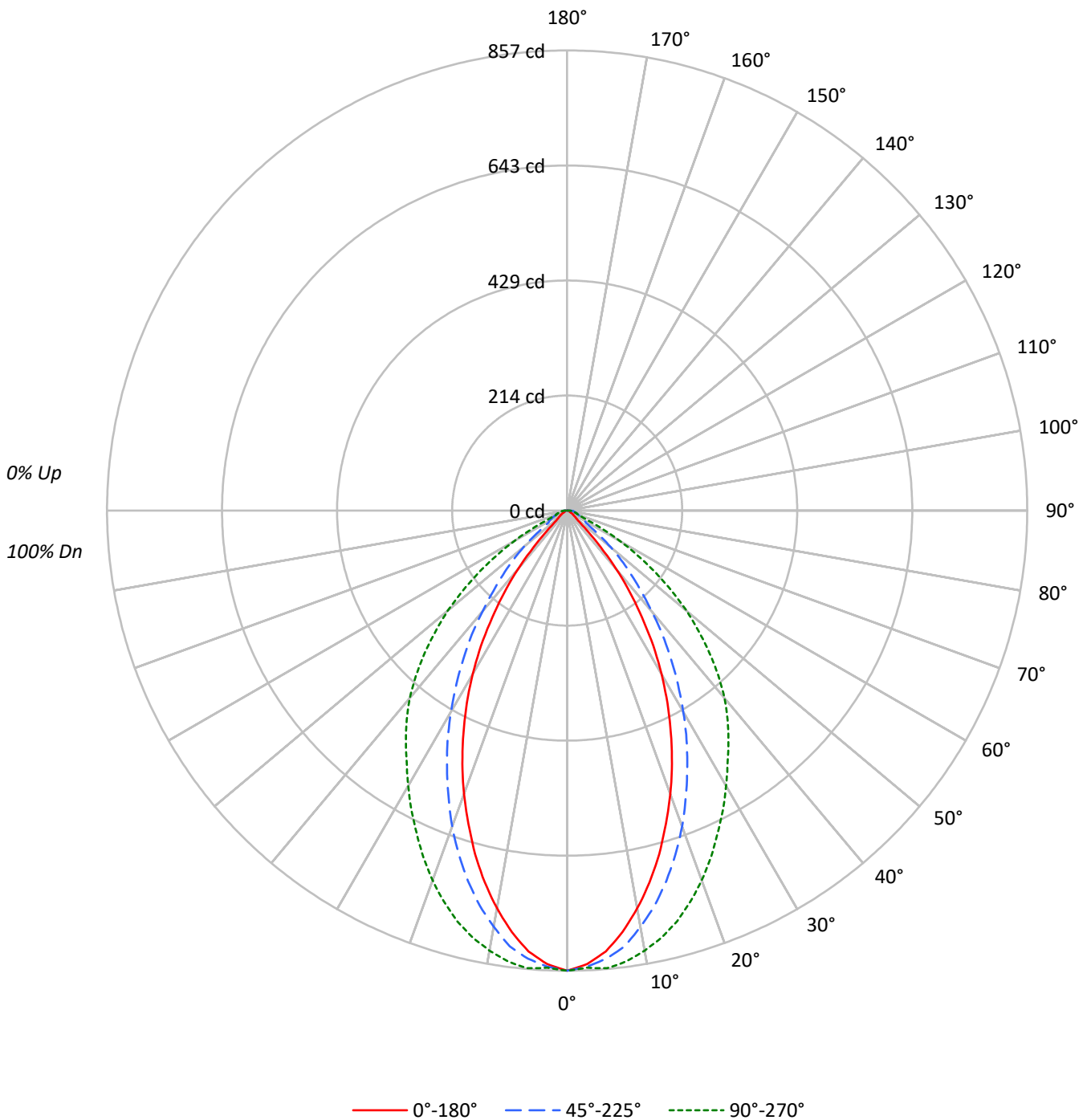
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1028.7 lumens  
Efficiency: N/A  
Efficacy: 33.0 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	98	98	96	95	95	93	92	90					90			
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81					81			
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73					73			
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66					66			
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60					60			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55					55			
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50					50			
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47					47			
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43					43			
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40					40			

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

	0°	45°	90°
0°	10061	10061	10061
5°	9715	9874	10086
10°	8968	9384	9922
15°	8049	8677	9622
20°	7020	7823	9160
25°	5922	6856	8593
30°	4763	5863	8030
35°	3486	4827	7506
40°	2175	3763	6990
45°	822	2805	6226
50°	391	1933	5307
55°	299	1060	4103
60°	211	899	2696
65°	156	781	1125
70°	154	735	735
75°	204	767	767
80°	304	913	839
85°	606	1522	1213

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6226 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.7	7.6
10°-20°	201.7	19.6
20°-30°	249.7	24.3
30°-40°	223.8	21.8
40°-50°	146.7	14.3
50°-60°	73.4	7.1
60°-70°	28.6	2.8
70°-80°	16.1	1.6
80°-90°	10.0	1.0
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°	530.0	51.5
0°-40°	753.8	73.3
0°-60°	974.0	94.7
0°-90°	1028.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1028.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	824	838	838	847	856	76
15°	662	689	714	761	792	184
25°	457	485	529	605	663	209
35°	243	276	337	438	524	151
45°	50	80	169	289	375	47
55°	15	18	52	142	200	13
65°	6	17	28	37	40	6
75°	4	17	17	17	17	5
85°	4	11	11	11	9	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	856.8	856.8	856.8	856.8	856.8
2.5°	845.6	858.0	850.1	851.2	852.3
5°	824.2	837.7	837.7	846.7	855.7
7.5°	791.5	807.3	818.6	834.3	846.7
10°	752.1	771.3	787.0	815.2	832.1
12.5°	709.3	733.0	753.3	790.4	814.1
15°	662.1	689.1	713.8	761.1	791.5
17.5°	611.4	638.4	671.1	726.2	763.4
20°	561.8	588.9	626.0	688.0	733.0
22.5°	510.1	538.2	577.6	646.3	699.2
25°	457.1	485.3	529.2	604.6	663.2
27.5°	404.2	432.4	481.9	564.1	628.3
30°	351.3	379.4	432.4	520.2	592.2
32.5°	298.4	328.8	383.9	479.7	556.2
35°	243.2	275.9	336.7	438.0	523.6
37.5°	192.5	222.9	291.6	402.0	490.9
40°	141.9	174.5	245.5	367.1	456.0
42.5°	92.3	127.2	203.8	328.8	416.6
45°	49.5	79.9	168.9	289.4	374.9
47.5°	27.0	43.9	136.2	247.7	332.2
50°	21.4	24.8	105.8	211.7	290.5
52.5°	18.0	20.3	75.4	177.9	244.3
55°	14.6	18.0	51.8	141.9	200.4
57.5°	12.4	15.8	40.5	110.3	156.5
60°	9.0	13.5	38.3	81.1	114.8
62.5°	6.8	14.6	33.8	56.3	75.4
65°	5.6	16.9	28.1	37.2	40.5
67.5°	4.5	18.0	24.8	23.6	23.6
70°	4.5	16.9	21.4	20.3	21.4
72.5°	4.5	18.0	19.1	18.0	19.1
75°	4.5	16.9	16.9	16.9	16.9
77.5°	4.5	15.8	15.8	14.6	14.6
80°	4.5	13.5	13.5	13.5	12.4
82.5°	4.5	12.4	12.4	12.4	10.1
85°	4.5	11.3	11.3	11.3	9.0
87.5°	3.4	10.1	11.3	10.1	6.8
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	0.39	1.65	0.76	1.96	2.27	14.62	15.88	14.99	16.19	16.51
	3H	2.72	3.83	3.10	4.16	4.52	14.70	15.81	15.08	16.15	16.51
	4H	3.82	4.85	4.22	5.20	5.59	14.78	15.82	15.19	16.17	16.55
	6H	4.81	5.76	5.22	6.13	6.52	14.89	15.83	15.30	16.21	16.60
	8H	5.29	6.19	5.72	6.58	6.98	14.94	15.84	15.37	16.23	16.64
	12H	5.85	6.70	6.28	7.09	7.52	15.02	15.88	15.46	16.27	16.70
4H	2H	3.63	4.66	4.03	5.01	5.40	14.48	15.51	14.88	15.86	16.25
	3H	5.94	6.79	6.36	7.19	7.60	14.65	15.50	15.07	15.90	16.31
	4H	7.32	8.07	7.75	8.49	8.94	14.81	15.56	15.24	15.98	16.43
	6H	8.40	9.06	8.87	9.50	9.97	15.03	15.68	15.49	16.13	16.60
	8H	8.86	9.47	9.33	9.92	10.39	15.15	15.76	15.62	16.21	16.68
	12H	9.36	9.89	9.84	10.38	10.85	15.33	15.87	15.82	16.35	16.83
8H	4H	8.29	8.90	8.76	9.35	9.82	14.80	15.41	15.27	15.86	16.33
	6H	9.81	10.31	10.32	10.81	11.29	15.14	15.64	15.64	16.14	16.62
	8H	10.59	11.04	11.11	11.55	12.05	15.37	15.82	15.90	16.34	16.83
	12H	11.39	11.79	11.91	12.29	12.86	15.71	16.11	16.22	16.60	17.17
12H	4H	8.47	9.01	8.96	9.49	9.96	14.79	15.33	15.27	15.81	16.28
	6H	10.13	10.58	10.65	11.09	11.59	15.16	15.61	15.68	16.12	16.62
	8H	11.09	11.48	11.60	11.98	12.55	15.47	15.87	15.99	16.36	16.94