

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: P1059413

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059413  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

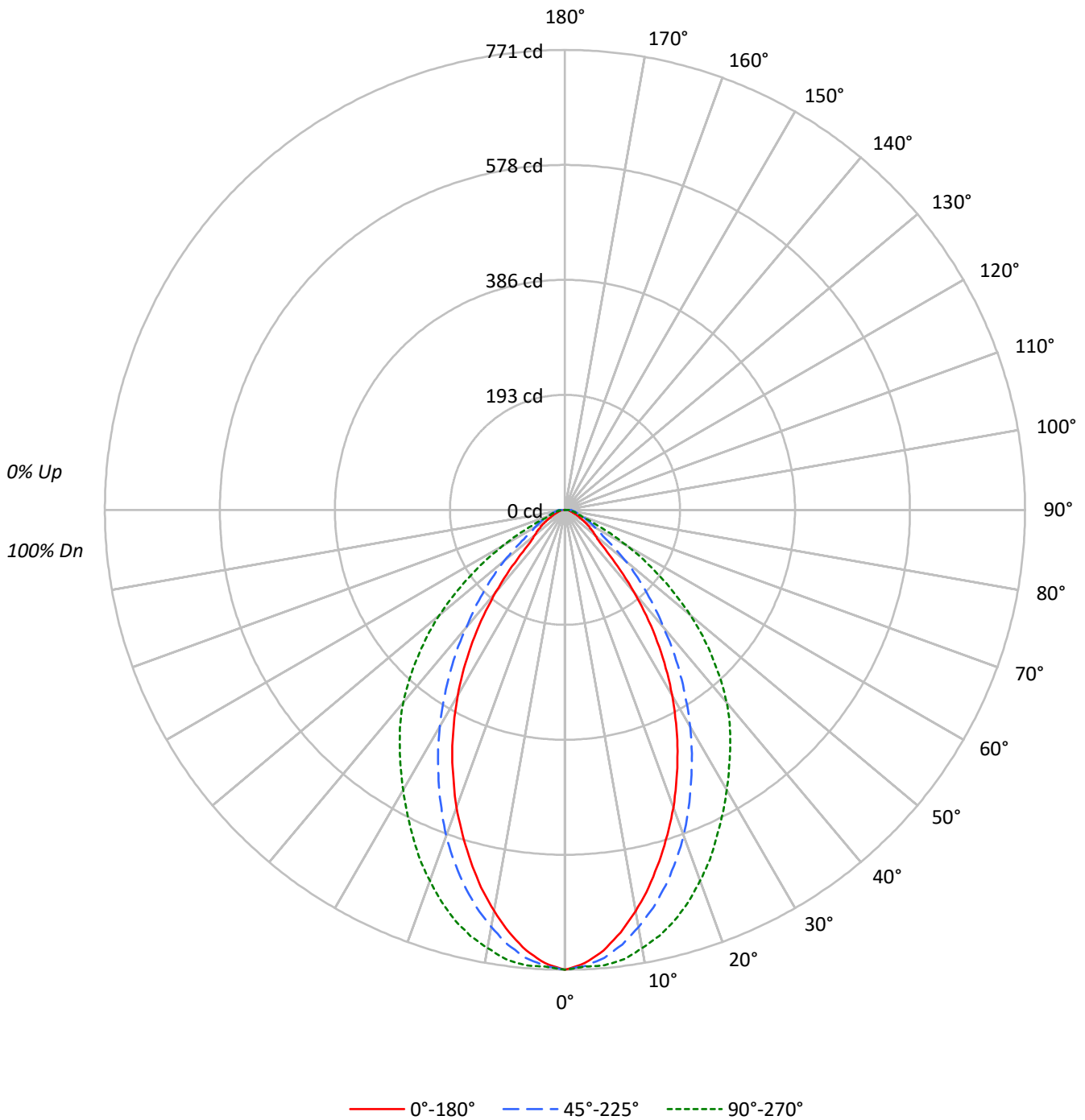
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1032.4 lumens  
Efficiency: N/A  
Efficacy: 33.1 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98  
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 (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				100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58				58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37				37

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

	0°	45°	90°
0°	9052	9052	9052
5°	8741	8888	9034
10°	8145	8467	8896
15°	7416	7921	8660
20°	6638	7270	8269
25°	5789	6489	7815
30°	4868	5692	7354
35°	3872	4824	6921
40°	2761	3933	6469
45°	1644	3159	5794
50°	1213	2406	5016
55°	1013	1636	3986
60°	820	1348	2802
65°	656	1156	1500
70°	542	1006	927
75°	513	971	867
80°	534	1068	839
85°	754	1522	1064

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5794 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.8	6.9
10°-20°	184.0	17.8
20°-30°	234.6	22.7
30°-40°	220.8	21.4
40°-50°	158.6	15.4
50°-60°	90.9	8.8
60°-70°	41.6	4.0
70°-80°	20.9	2.0
80°-90°	10.2	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°	489.4	47.4
0°-40°	710.2	68.8
0°-60°	959.7	93.0
0°-90°	1032.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1032.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	771	771	771	771	771	
5°	742	756	754	760	766	69
15°	610	631	652	686	712	170
25°	447	467	501	555	603	204
35°	270	289	336	413	483	167
45°	99	120	190	280	349	83
55°	50	51	80	147	195	44
65°	24	33	42	46	54	24
75°	11	22	21	19	19	12
85°	6	11	11	10	8	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	770.9	770.9	770.9	770.9	770.9
2.5°	760.8	772.0	765.3	765.3	766.4
5°	741.6	756.3	754.0	759.6	766.4
7.5°	714.6	730.4	734.9	748.4	759.6
10°	683.1	701.1	710.1	731.5	746.1
12.5°	648.2	668.5	683.1	710.1	731.5
15°	610.0	631.4	651.6	686.5	712.4
17.5°	570.6	592.0	617.8	658.4	688.7
20°	531.2	552.6	581.8	624.6	661.7
22.5°	488.4	509.8	541.3	589.7	634.7
25°	446.8	467.0	500.8	554.8	603.2
27.5°	402.9	423.2	460.3	518.8	572.8
30°	359.0	379.3	419.8	482.8	542.4
32.5°	315.1	334.2	378.1	447.9	512.1
35°	270.1	289.2	336.5	413.0	482.8
37.5°	224.0	243.1	298.2	381.5	453.5
40°	180.1	201.4	256.6	350.0	422.0
42.5°	137.3	159.8	222.8	316.2	386.0
45°	99.0	120.4	190.2	280.2	348.9
47.5°	75.4	86.7	160.9	244.2	312.9
50°	66.4	67.5	131.7	211.6	274.6
52.5°	57.4	58.5	102.4	180.1	234.1
55°	49.5	50.6	79.9	147.4	194.7
57.5°	41.6	43.9	65.3	117.0	156.4
60°	34.9	39.4	57.4	88.9	119.3
62.5°	28.1	36.0	49.5	65.3	85.5
65°	23.6	32.6	41.6	46.1	54.0
67.5°	19.1	30.4	34.9	32.6	32.6
70°	15.8	27.0	29.3	27.0	27.0
72.5°	13.5	25.9	24.8	22.5	22.5
75°	11.3	22.5	21.4	19.1	19.1
77.5°	10.1	19.1	18.0	16.9	15.8
80°	7.9	15.8	15.8	14.6	12.4
82.5°	6.8	13.5	13.5	12.4	10.1
85°	5.6	11.3	11.3	10.1	7.9
87.5°	4.5	10.1	10.1	9.0	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	7.64	8.96	8.00	9.27	9.58	14.86	16.18	15.22	16.49	16.81
	3H	9.04	10.21	9.42	10.54	10.90	15.10	16.26	15.47	16.59	16.96
	4H	9.60	10.69	10.00	11.04	11.43	15.20	16.29	15.60	16.64	17.03
	6H	10.06	11.06	10.48	11.43	11.83	15.31	16.31	15.72	16.68	17.08
	8H	10.25	11.20	10.68	11.59	11.99	15.36	16.31	15.79	16.70	17.10
	12H	10.44	11.35	10.87	11.73	12.16	15.41	16.32	15.84	16.70	17.13
4H	2H	8.71	9.80	9.11	10.15	10.53	14.82	15.91	15.22	16.26	16.64
	3H	10.40	11.29	10.81	11.70	12.10	15.19	16.08	15.60	16.49	16.89
	4H	11.24	12.03	11.67	12.45	12.90	15.37	16.17	15.81	16.59	17.03
	6H	11.89	12.59	12.36	13.03	13.50	15.60	16.29	16.06	16.73	17.20
	8H	12.15	12.80	12.62	13.24	13.71	15.70	16.34	16.16	16.79	17.26
	12H	12.41	12.98	12.89	13.46	13.94	15.81	16.38	16.30	16.87	17.34
8H	4H	11.67	12.32	12.14	12.76	13.23	15.42	16.06	15.89	16.51	16.98
	6H	12.62	13.15	13.13	13.65	14.13	15.75	16.28	16.25	16.78	17.26
	8H	13.09	13.57	13.61	14.08	14.57	15.94	16.42	16.46	16.93	17.42
	12H	13.57	13.99	14.08	14.49	15.06	16.17	16.60	16.69	17.09	17.66
12H	4H	11.73	12.30	12.22	12.79	13.26	15.41	15.98	15.90	16.46	16.94
	6H	12.77	13.25	13.29	13.76	14.26	15.78	16.25	16.30	16.77	17.26
	8H	13.37	13.79	13.88	14.28	14.85	16.04	16.46	16.55	16.95	17.53