

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: P1059477

Luminaire Tested: S123RDR-H1000D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059477  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1000D940-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

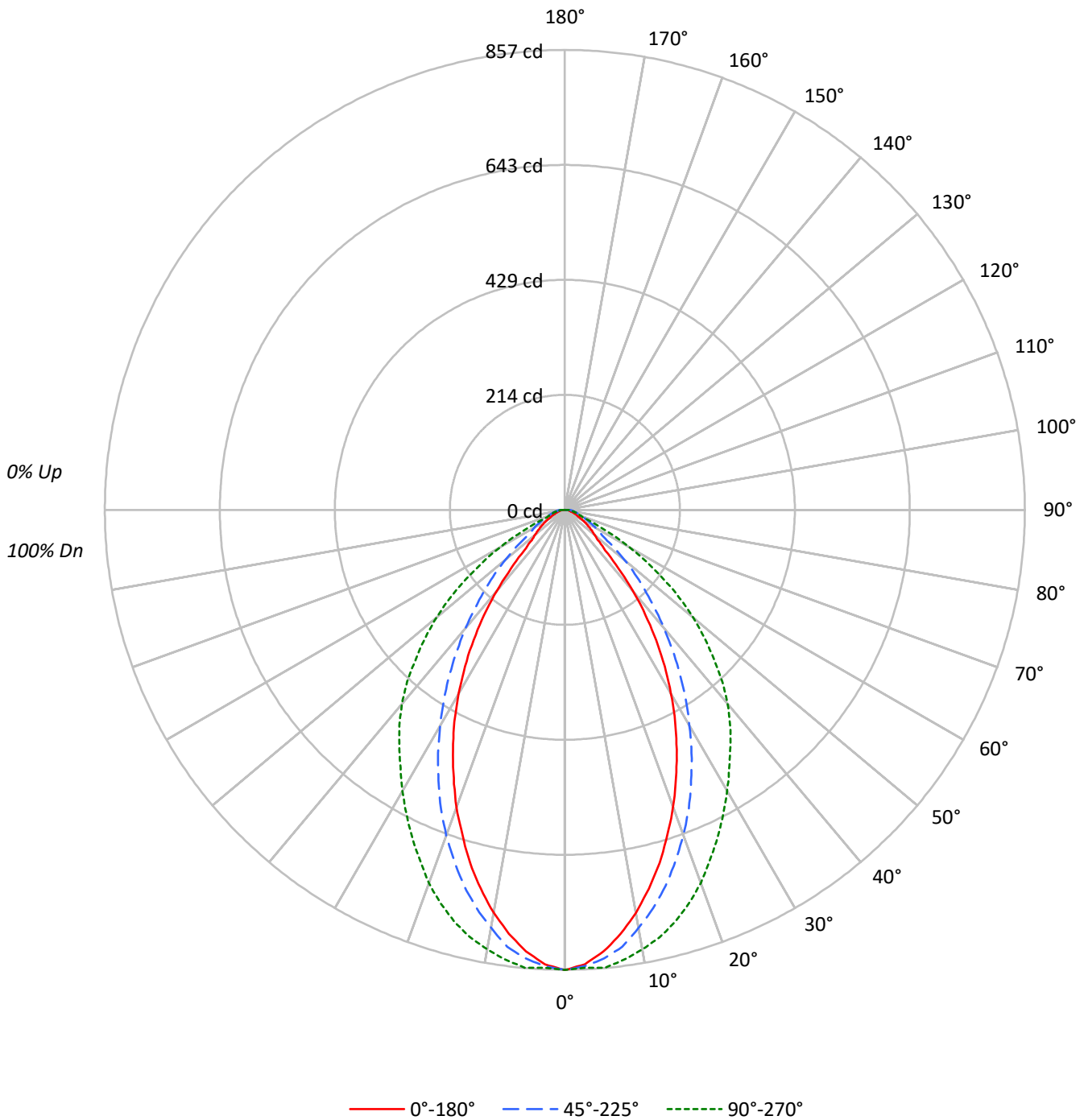
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1150.8 lumens  
Efficiency: N/A  
Efficacy: 36.9 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.08 / 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				
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				

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

	0°	45°	90°
0°	10067	10067	10067
5°	9741	9892	10092
10°	9092	9435	9917
15°	8286	8816	9658
20°	7373	8065	9250
25°	6389	7217	8721
30°	5357	6295	8202
35°	4245	5358	7709
40°	3004	4407	7232
45°	1769	3484	6508
50°	1323	2645	5700
55°	1112	1787	4578
60°	899	1527	3250
65°	711	1303	1717
70°	621	1133	1061
75°	581	1062	1016
80°	575	1150	1008
85°	714	1725	1293

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6508 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.9	6.9
10°-20°	205.1	17.8
20°-30°	261.1	22.7
30°-40°	245.6	21.3
40°-50°	176.9	15.4
50°-60°	102.2	8.9
60°-70°	46.7	4.1
70°-80°	23.3	2.0
80°-90°	11.0	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°	545.1	47.4
0°-40°	790.7	68.7
0°-60°	1069.8	93.0
0°-90°	1150.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1150.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	826	840	839	848	856	77
15°	682	706	725	766	794	190
25°	493	519	557	619	673	226
35°	296	322	374	460	538	184
45°	106	133	210	315	392	90
55°	54	56	87	166	224	49
65°	26	36	47	52	62	26
75°	13	24	23	22	22	14
85°	5	12	13	12	10	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	857.3	857.3	857.3	857.3	857.3
2.5°	847.7	858.4	850.9	852.0	854.1
5°	826.4	840.3	839.2	847.7	856.2
7.5°	796.6	812.6	821.1	833.9	845.6
10°	762.5	780.6	791.3	814.7	831.7
12.5°	723.1	746.5	760.4	791.3	815.8
15°	681.6	706.1	725.2	765.7	794.5
17.5°	634.7	661.3	685.8	733.8	768.9
20°	590.0	615.6	645.4	697.6	740.2
22.5°	541.0	568.7	602.8	658.2	706.1
25°	493.1	518.6	557.0	618.7	673.1
27.5°	445.2	470.7	511.2	579.3	639.0
30°	395.1	421.7	464.3	539.9	604.9
32.5°	346.1	371.7	419.6	501.6	569.8
35°	296.1	321.6	373.8	460.1	537.8
37.5°	247.1	273.7	329.1	426.0	505.9
40°	196.0	224.7	287.5	390.8	471.8
42.5°	148.0	178.9	246.0	354.6	434.5
45°	106.5	133.1	209.8	315.2	391.9
47.5°	83.1	96.9	176.8	274.8	352.5
50°	72.4	74.5	144.8	237.5	312.0
52.5°	62.8	65.0	114.0	202.3	269.4
55°	54.3	56.4	87.3	166.1	223.6
57.5°	45.8	49.0	72.4	132.1	180.0
60°	38.3	42.6	65.0	101.2	138.4
62.5°	30.9	38.3	55.4	74.5	99.0
65°	25.6	36.2	46.9	52.2	61.8
67.5°	21.3	33.0	39.4	37.3	36.2
70°	18.1	29.8	33.0	29.8	30.9
72.5°	14.9	27.7	27.7	25.6	25.6
75°	12.8	24.5	23.4	22.4	22.4
77.5°	10.6	21.3	20.2	19.2	18.1
80°	8.5	17.0	17.0	16.0	14.9
82.5°	7.5	13.8	13.8	13.8	11.7
85°	5.3	11.7	12.8	11.7	9.6
87.5°	4.3	10.6	10.6	9.6	6.4
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	8.00	9.31	8.36	9.63	9.94	15.36	16.68	15.72	16.99	17.31
	3H	9.38	10.55	9.76	10.88	11.25	15.59	16.76	15.97	17.09	17.45
	4H	9.94	11.03	10.34	11.38	11.76	15.70	16.79	16.11	17.15	17.53
	6H	10.37	11.37	10.78	11.74	12.13	15.82	16.82	16.23	17.19	17.58
	8H	10.55	11.49	10.98	11.89	12.29	15.87	16.82	16.30	17.21	17.62
	12H	10.70	11.61	11.13	11.99	12.42	15.93	16.84	16.36	17.22	17.65
4H	2H	9.10	10.19	9.50	10.54	10.92	15.32	16.41	15.72	16.76	17.14
	3H	10.76	11.65	11.17	12.05	12.46	15.68	16.57	16.09	16.97	17.38
	4H	11.57	12.37	12.00	12.79	13.23	15.87	16.67	16.31	17.09	17.54
	6H	12.20	12.89	12.66	13.34	13.80	16.10	16.79	16.56	17.24	17.71
	8H	12.44	13.08	12.90	13.53	14.00	16.21	16.85	16.67	17.30	17.77
	12H	12.65	13.22	13.13	13.70	14.18	16.33	16.91	16.82	17.39	17.86
8H	4H	12.01	12.65	12.48	13.10	13.57	15.91	16.56	16.38	17.00	17.48
	6H	12.92	13.45	13.42	13.94	14.42	16.24	16.77	16.74	17.27	17.75
	8H	13.33	13.81	13.86	14.33	14.82	16.43	16.91	16.95	17.42	17.91
	12H	13.75	14.17	14.27	14.67	15.24	16.68	17.10	17.19	17.59	18.17
12H	4H	12.07	12.64	12.55	13.12	13.59	15.90	16.47	16.39	16.96	17.43
	6H	13.05	13.53	13.57	14.04	14.53	16.26	16.73	16.78	17.25	17.74
	8H	13.59	14.01	14.10	14.50	15.08	16.51	16.93	17.03	17.43	18.00