

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: P1059149

Luminaire Tested: S123RDRP-S1165D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059149  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D940-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

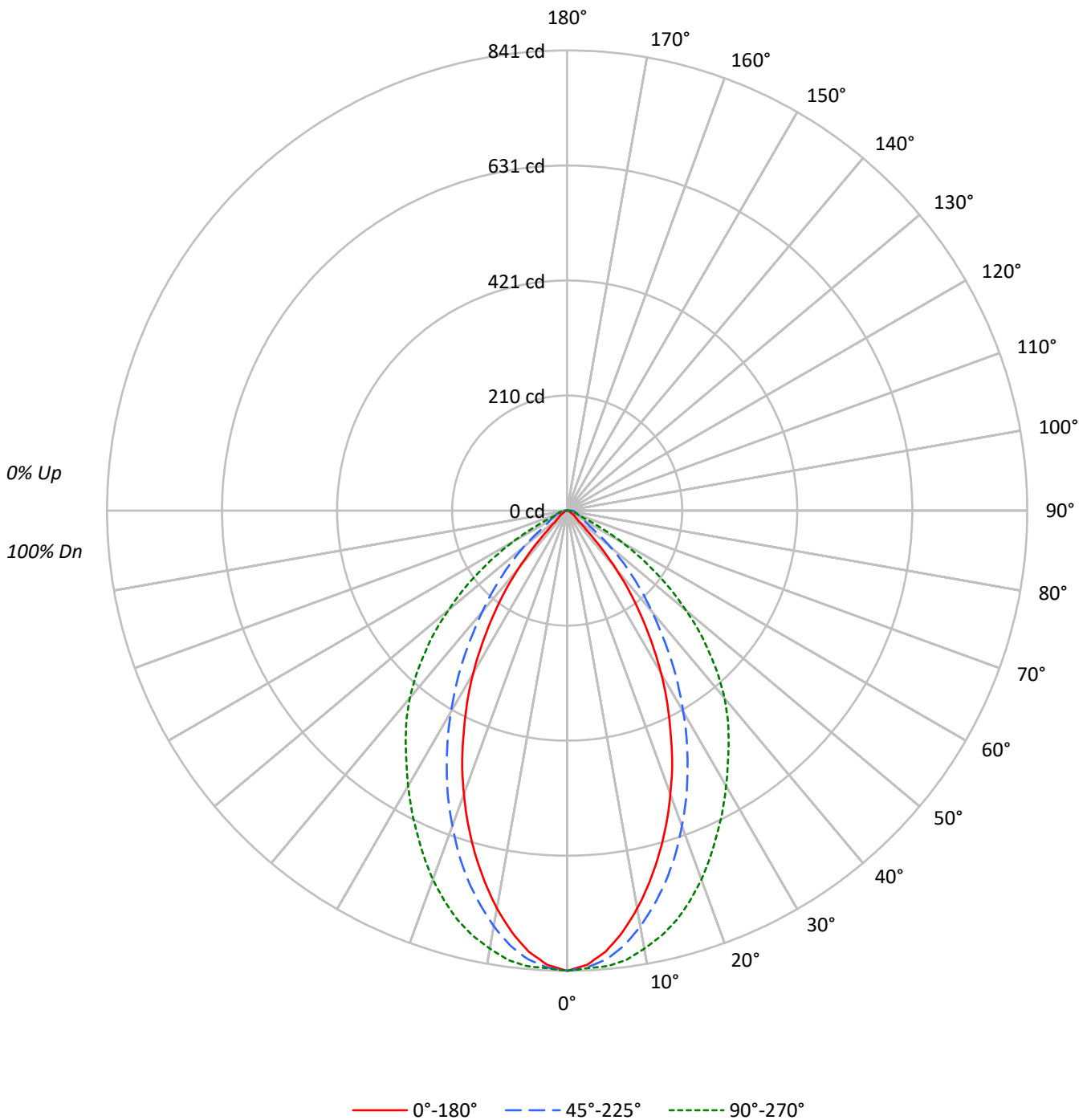
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1010.3 lumens  
Efficiency: N/A  
Efficacy: 24.2 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): 41.8  
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	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81					81			
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73					73			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66					66			
5	86	76	69	64	84	75	68	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	64	58	53	63	57	53	62	56	52	61	56	52	50					50			
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46					46			
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	41	40					40			

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

	0°	45°	90°
0°	9877	9877	9877
5°	9535	9702	9853
10°	8802	9200	9691
15°	7896	8505	9412
20°	6894	7665	8967
25°	5798	6748	8415
30°	4656	5754	7882
35°	3410	4738	7374
40°	2109	3687	6860
45°	812	2777	6108
50°	400	1904	5168
55°	315	1052	4056
60°	211	876	2717
65°	178	786	1214
70°	175	707	707
75°	231	758	699
80°	345	953	784
85°	525	1563	1037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6108 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.1	7.6
10°-20°	197.4	19.5
20°-30°	245.0	24.3
30°-40°	219.5	21.7
40°-50°	144.3	14.3
50°-60°	72.3	7.2
60°-70°	28.5	2.8
70°-80°	16.0	1.6
80°-90°	10.1	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°	519.6	51.4
0°-40°	739.1	73.2
0°-60°	955.7	94.6
0°-90°	1010.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1010.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	809	822	823	828	836	75
15°	650	670	700	747	774	181
25°	448	476	521	594	650	205
35°	238	270	330	432	514	148
45°	49	81	167	282	368	46
55°	15	18	51	139	198	14
65°	6	18	28	36	44	6
75°	5	17	17	15	15	5
85°	4	12	12	12	8	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	841.1	841.1	841.1	841.1	841.1
2.5°	830.8	842.4	835.9	835.9	837.2
5°	808.9	821.8	823.1	828.2	835.9
7.5°	776.8	793.5	801.2	816.6	828.2
10°	738.2	756.2	771.6	798.6	812.8
12.5°	695.7	713.8	736.9	774.2	796.1
15°	649.5	670.0	699.6	747.2	774.2
17.5°	601.9	622.4	658.5	712.5	747.2
20°	551.7	574.9	613.4	675.2	717.6
22.5°	501.6	527.3	568.4	635.3	684.2
25°	447.5	475.8	520.8	594.2	649.5
27.5°	396.1	425.7	473.3	553.0	616.0
30°	343.4	373.0	424.4	510.6	581.3
32.5°	289.4	322.8	376.8	470.7	546.6
35°	237.9	270.1	330.5	432.1	514.4
37.5°	187.8	219.9	282.9	394.8	482.3
40°	137.6	171.0	240.5	358.8	447.5
42.5°	90.0	124.7	203.2	322.8	409.0
45°	48.9	81.0	167.2	281.6	367.8
47.5°	27.0	43.7	135.0	243.1	327.9
50°	21.9	24.4	104.2	207.1	282.9
52.5°	18.0	20.6	74.6	172.3	241.8
55°	15.4	18.0	51.4	138.9	198.1
57.5°	12.9	15.4	41.2	106.7	155.6
60°	9.0	15.4	37.3	78.4	115.7
62.5°	7.7	15.4	32.2	54.0	77.2
65°	6.4	18.0	28.3	36.0	43.7
67.5°	5.1	18.0	24.4	23.1	23.1
70°	5.1	18.0	20.6	19.3	20.6
72.5°	5.1	19.3	19.3	18.0	18.0
75°	5.1	16.7	16.7	15.4	15.4
77.5°	5.1	15.4	15.4	14.1	14.1
80°	5.1	14.1	14.1	12.9	11.6
82.5°	5.1	12.9	12.9	11.6	10.3
85°	3.9	11.6	11.6	11.6	7.7
87.5°	3.9	10.3	11.6	10.3	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	0.41	1.66	0.77	1.98	2.29	14.50	15.76	14.87	16.07	16.39
	3H	2.93	4.04	3.31	4.37	4.74	14.58	15.69	14.96	16.02	16.39
	4H	4.09	5.13	4.49	5.48	5.86	14.64	15.68	15.05	16.03	16.41
	6H	5.13	6.09	5.55	6.46	6.85	14.74	15.69	15.16	16.06	16.46
	8H	5.67	6.57	6.10	6.96	7.37	14.80	15.70	15.23	16.09	16.50
	12H	6.16	7.02	6.59	7.40	7.83	14.87	15.73	15.30	16.11	16.54
4H	2H	3.67	4.71	4.08	5.06	5.45	14.36	15.40	14.76	15.75	16.13
	3H	6.14	6.98	6.55	7.39	7.79	14.53	15.38	14.95	15.79	16.19
	4H	7.48	8.23	7.91	8.65	9.10	14.66	15.42	15.10	15.84	16.28
	6H	8.60	9.26	9.07	9.70	10.17	14.88	15.53	15.34	15.98	16.45
	8H	9.11	9.72	9.58	10.17	10.64	15.00	15.61	15.47	16.06	16.53
	12H	9.57	10.11	10.06	10.60	11.07	15.16	15.70	15.65	16.19	16.66
8H	4H	8.39	9.00	8.86	9.45	9.92	14.66	15.28	15.14	15.72	16.20
	6H	9.99	10.49	10.49	10.99	11.47	15.00	15.50	15.50	15.99	16.48
	8H	10.82	11.27	11.34	11.78	12.28	15.23	15.68	15.75	16.19	16.69
	12H	11.60	12.00	12.12	12.50	13.07	15.55	15.95	16.07	16.45	17.02
12H	4H	8.56	9.10	9.05	9.58	10.06	14.65	15.19	15.14	15.68	16.15
	6H	10.30	10.76	10.83	11.27	11.76	15.03	15.48	15.55	15.99	16.49
	8H	11.32	11.72	11.83	12.21	12.79	15.34	15.74	15.85	16.23	16.80