

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: P1059446

Luminaire Tested: S123RDR-H1000D927-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059446  
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: S123RDR-H1000D927-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

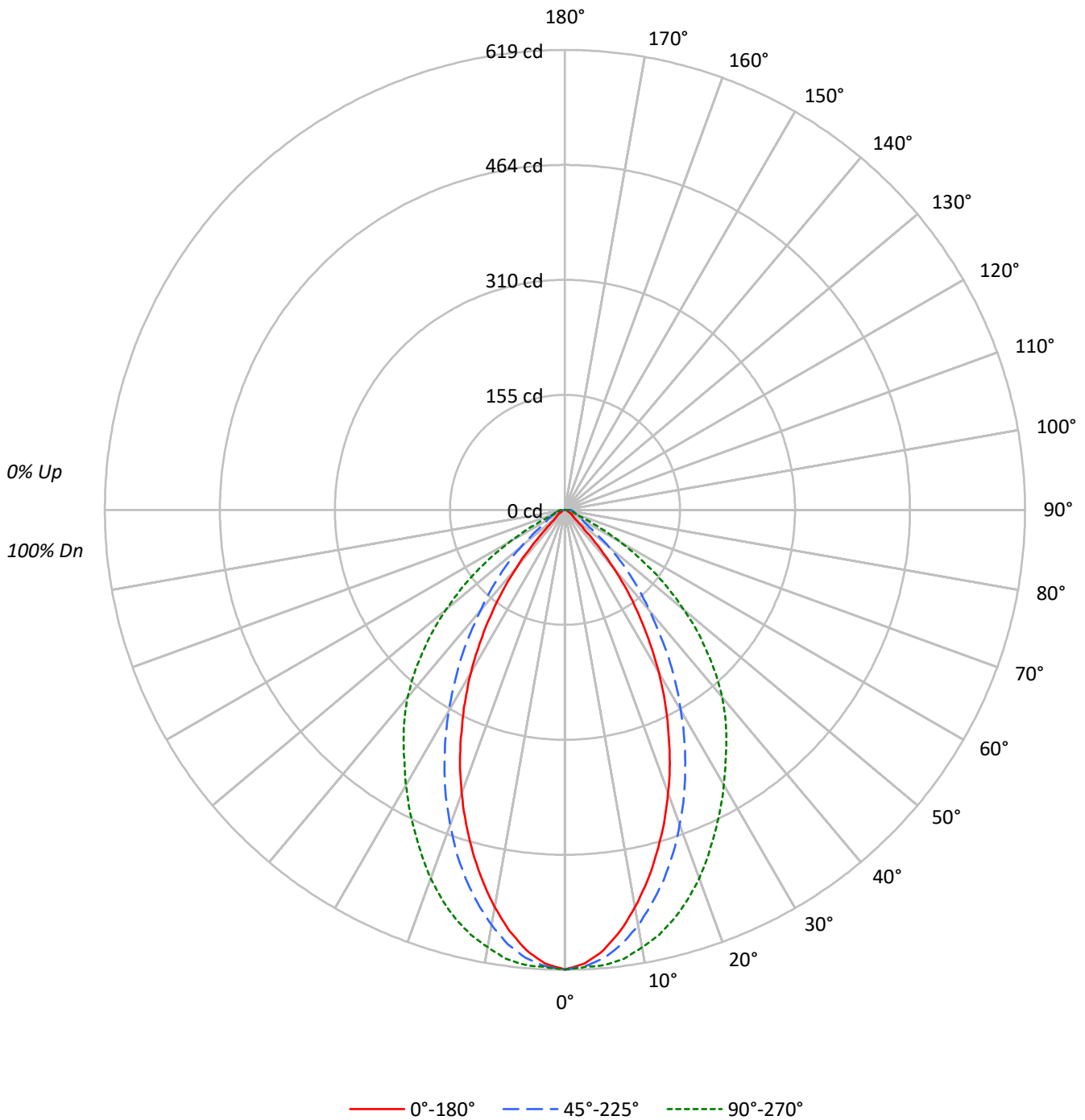
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 743.2 lumens  
Efficiency: N/A  
Efficacy: 23.8 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 (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40

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

	0°	45°	90°
0°	7265	7265	7265
5°	7015	7137	7248
10°	6475	6768	7129
15°	5808	6257	6923
20°	5072	5639	6597
25°	4265	4965	6191
30°	3425	4233	5798
35°	2509	3485	5424
40°	1551	2712	5046
45°	598	2043	4494
50°	294	1399	3802
55°	233	774	2983
60°	155	643	1999
65°	131	578	895
70°	130	518	518
75°	172	558	517
80°	257	703	575
85°	377	1145	768

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4494 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	7.6
10°-20°	145.2	19.5
20°-30°	180.3	24.3
30°-40°	161.5	21.7
40°-50°	106.2	14.3
50°-60°	53.2	7.2
60°-70°	21.0	2.8
70°-80°	11.8	1.6
80°-90°	7.4	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°	382.2	51.4
0°-40°	543.7	73.2
0°-60°	703.1	94.6
0°-90°	743.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	743.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	595	604	606	609	615	55
15°	478	493	515	550	570	133
25°	329	350	383	437	478	151
35°	175	199	243	318	378	109
45°	36	60	123	207	271	34
55°	11	13	38	102	146	10
65°	5	13	21	26	32	5
75°	4	12	12	11	11	4
85°	3	8	8	8	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	618.7	618.7	618.7	618.7	618.7
2.5°	611.2	619.7	614.9	614.9	615.9
5°	595.1	604.5	605.5	609.3	614.9
7.5°	571.4	583.7	589.4	600.7	609.3
10°	543.0	556.3	567.6	587.5	597.9
12.5°	511.8	525.1	542.1	569.5	585.6
15°	477.8	492.9	514.7	549.7	569.5
17.5°	442.8	457.9	484.4	524.1	549.7
20°	405.9	422.9	451.3	496.7	527.9
22.5°	369.0	387.9	418.2	467.4	503.3
25°	329.2	350.0	383.2	437.1	477.8
27.5°	291.4	313.1	348.2	406.8	453.2
30°	252.6	274.4	312.2	375.6	427.6
32.5°	212.9	237.5	277.2	346.3	402.1
35°	175.0	198.7	243.1	317.9	378.4
37.5°	138.1	161.8	208.1	290.4	354.8
40°	101.2	125.8	176.9	264.0	329.2
42.5°	66.2	91.8	149.5	237.5	300.8
45°	36.0	59.6	123.0	207.2	270.6
47.5°	19.9	32.2	99.3	178.8	241.2
50°	16.1	18.0	76.6	152.3	208.1
52.5°	13.2	15.1	54.9	126.8	177.9
55°	11.4	13.2	37.8	102.2	145.7
57.5°	9.5	11.4	30.3	78.5	114.5
60°	6.6	11.4	27.4	57.7	85.1
62.5°	5.7	11.4	23.7	39.7	56.8
65°	4.7	13.2	20.8	26.5	32.2
67.5°	3.8	13.2	18.0	17.0	17.0
70°	3.8	13.2	15.1	14.2	15.1
72.5°	3.8	14.2	14.2	13.2	13.2
75°	3.8	12.3	12.3	11.4	11.4
77.5°	3.8	11.4	11.4	10.4	10.4
80°	3.8	10.4	10.4	9.5	8.5
82.5°	3.8	9.5	9.5	8.5	7.6
85°	2.8	8.5	8.5	8.5	5.7
87.5°	2.8	7.6	8.5	7.6	4.7
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	0.00	0.63	0.00	0.95	1.26	13.44	14.69	13.80	15.00	15.32
	3H	1.88	2.99	2.26	3.32	3.69	13.51	14.63	13.89	14.96	15.32
	4H	3.05	4.08	3.45	4.43	4.82	13.58	14.61	13.98	14.96	15.35
	6H	4.10	5.05	4.52	5.42	5.82	13.68	14.63	14.09	15.00	15.39
	8H	4.64	5.54	5.07	5.93	6.34	13.74	14.64	14.17	15.03	15.43
	12H	5.12	5.98	5.55	6.36	6.79	13.81	14.67	14.24	15.05	15.48
4H	2H	2.62	3.65	3.02	4.00	4.39	13.30	14.33	13.70	14.68	15.07
	3H	5.07	5.92	5.48	6.32	6.72	13.47	14.31	13.88	14.72	15.12
	4H	6.42	7.17	6.85	7.59	8.04	13.60	14.35	14.03	14.77	15.22
	6H	7.55	8.21	8.02	8.66	9.12	13.81	14.47	14.28	14.91	15.38
	8H	8.07	8.68	8.54	9.13	9.60	13.94	14.55	14.41	15.00	15.47
	12H	8.52	9.06	9.01	9.54	10.02	14.10	14.64	14.59	15.12	15.60
8H	4H	7.34	7.95	7.81	8.40	8.87	13.60	14.21	14.07	14.66	15.13
	6H	8.94	9.44	9.44	9.94	10.42	13.93	14.43	14.44	14.93	15.41
	8H	9.77	10.22	10.29	10.74	11.23	14.16	14.61	14.68	15.13	15.62
	12H	10.54	10.94	11.06	11.44	12.01	14.49	14.89	15.00	15.38	15.95
12H	4H	7.51	8.04	7.99	8.53	9.00	13.59	14.13	14.08	14.61	15.09
	6H	9.26	9.71	9.78	10.22	10.72	13.96	14.41	14.49	14.93	15.42
	8H	10.27	10.67	10.78	11.16	11.74	14.27	14.67	14.79	15.17	15.74