

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: P1059643

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059643  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D950-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

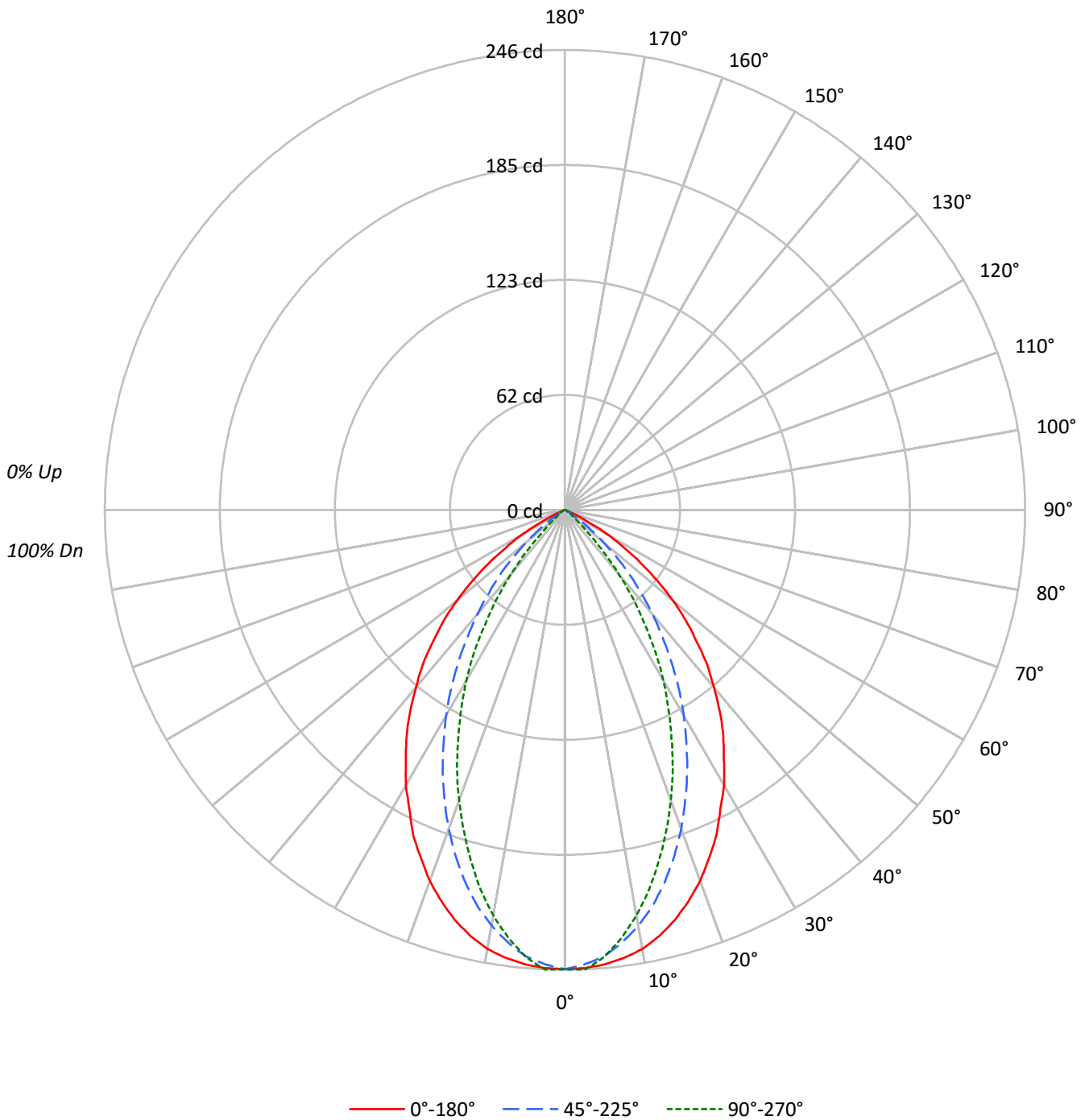
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 280.3 lumens  
Efficiency: N/A  
Efficacy: 24.0 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.93  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

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

	0°	45°	90°
0°	2885	2885	2885
5°	2877	2825	2830
10°	2844	2694	2627
15°	2761	2505	2361
20°	2639	2269	2067
25°	2486	2004	1748
30°	2306	1722	1426
35°	2116	1423	1061
40°	1898	1116	679
45°	1656	815	282
50°	1374	484	108
55°	1011	203	82
60°	613	75	47
65°	164	44	22
70°	0	14	14
75°	0	0	18
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1656 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.6	8.1
10°-20°	58.4	20.8
20°-30°	72.7	25.9
30°-40°	65.0	23.2
40°-50°	41.0	14.6
50°-60°	17.2	6.1
60°-70°	3.2	1.2
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	153.7	54.8
0°-40°	218.8	78.0
0°-60°	277.0	98.8
0°-90°	280.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	280.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	246	246	246	246	246	
5°	244	244	240	240	240	23
15°	227	222	206	197	194	64
25°	192	176	155	141	135	88
35°	148	126	99	82	74	92
45°	100	78	49	26	17	77
55°	49	34	10	4	4	44
65°	6	4	2	1	1	8
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	245.7	245.7	245.7	245.7	245.7
2.5°	245.3	245.7	243.3	245.7	246.1
5°	244.1	243.7	239.7	240.5	240.1
7.5°	241.7	240.5	233.4	231.8	231.0
10°	238.5	235.4	225.9	221.9	220.3
12.5°	233.4	229.0	216.8	210.4	208.1
15°	227.1	221.5	206.1	197.4	194.2
17.5°	219.5	211.6	194.2	184.7	180.0
20°	211.2	200.2	181.6	170.1	165.4
22.5°	201.4	189.1	168.1	155.9	150.7
25°	191.9	176.4	154.7	141.2	134.9
27.5°	180.0	163.8	140.4	126.6	119.9
30°	170.1	151.5	127.0	111.6	105.2
32.5°	158.2	138.8	113.1	96.1	90.2
35°	147.6	126.2	99.3	81.5	74.0
37.5°	136.1	113.9	85.4	66.9	59.7
40°	123.8	101.7	72.8	52.2	44.3
42.5°	112.7	89.4	60.1	38.8	30.9
45°	99.7	77.5	49.1	26.1	17.0
47.5°	87.8	66.5	37.2	14.6	9.1
50°	75.2	55.0	26.5	7.5	5.9
52.5°	62.1	43.9	17.4	5.1	4.7
55°	49.4	34.0	9.9	4.0	4.0
57.5°	37.2	24.5	5.1	3.2	2.8
60°	26.1	16.2	3.2	2.4	2.0
62.5°	15.0	9.5	2.4	1.6	1.6
65°	5.9	4.4	1.6	0.8	0.8
67.5°	0.4	1.2	0.8	0.4	0.4
70°	0.0	0.0	0.4	0.4	0.4
72.5°	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	8.87	10.04	9.23	10.35	10.67	0.00	0.00	0.00	0.00	0.00
	3H	8.71	9.74	9.09	10.07	10.44	0.00	0.00	0.00	0.00	0.00
	4H	8.62	9.57	9.03	9.93	10.31	0.00	0.00	0.00	0.00	0.00
	6H	8.53	9.40	8.94	9.77	10.17	0.00	0.00	0.00	0.00	0.00
	8H	8.48	9.30	8.91	9.69	10.10	0.00	0.00	0.00	0.00	0.00
	12H	8.43	9.21	8.86	9.60	10.03	0.00	0.00	0.00	0.00	0.00
4H	2H	8.63	9.58	9.03	9.93	10.32	0.00	0.00	0.00	0.00	0.00
	3H	8.46	9.23	8.87	9.64	10.04	0.00	0.00	0.00	0.00	0.00
	4H	8.36	9.04	8.79	9.46	9.91	0.00	0.00	0.00	0.00	0.00
	6H	8.26	8.84	8.73	9.29	9.76	0.00	0.00	0.00	0.00	0.00
	8H	8.19	8.74	8.67	9.19	9.66	0.00	0.00	0.00	0.00	0.00
	12H	8.14	8.61	8.63	9.10	9.58	0.00	0.00	0.00	0.00	0.00
8H	4H	8.19	8.74	8.67	9.19	9.66	0.00	0.00	0.00	0.00	0.00
	6H	8.08	8.52	8.58	9.02	9.50	0.00	0.00	0.00	0.00	0.00
	8H	8.01	8.40	8.53	8.92	9.42	0.00	0.00	0.00	0.00	0.00
	12H	7.95	8.30	8.47	8.80	9.37	0.00	0.00	0.00	0.00	0.00
12H	4H	8.14	8.61	8.63	9.10	9.58	0.00	0.00	0.00	0.00	0.00
	6H	8.01	8.40	8.53	8.92	9.42	0.00	0.00	0.00	0.00	0.00
	8H	7.95	8.30	8.47	8.80	9.37	0.00	0.00	0.00	0.00	0.00