

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: P1059310

Luminaire Tested: S123RDRP-S560D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059310  
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: S123RDRP-S560D940-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

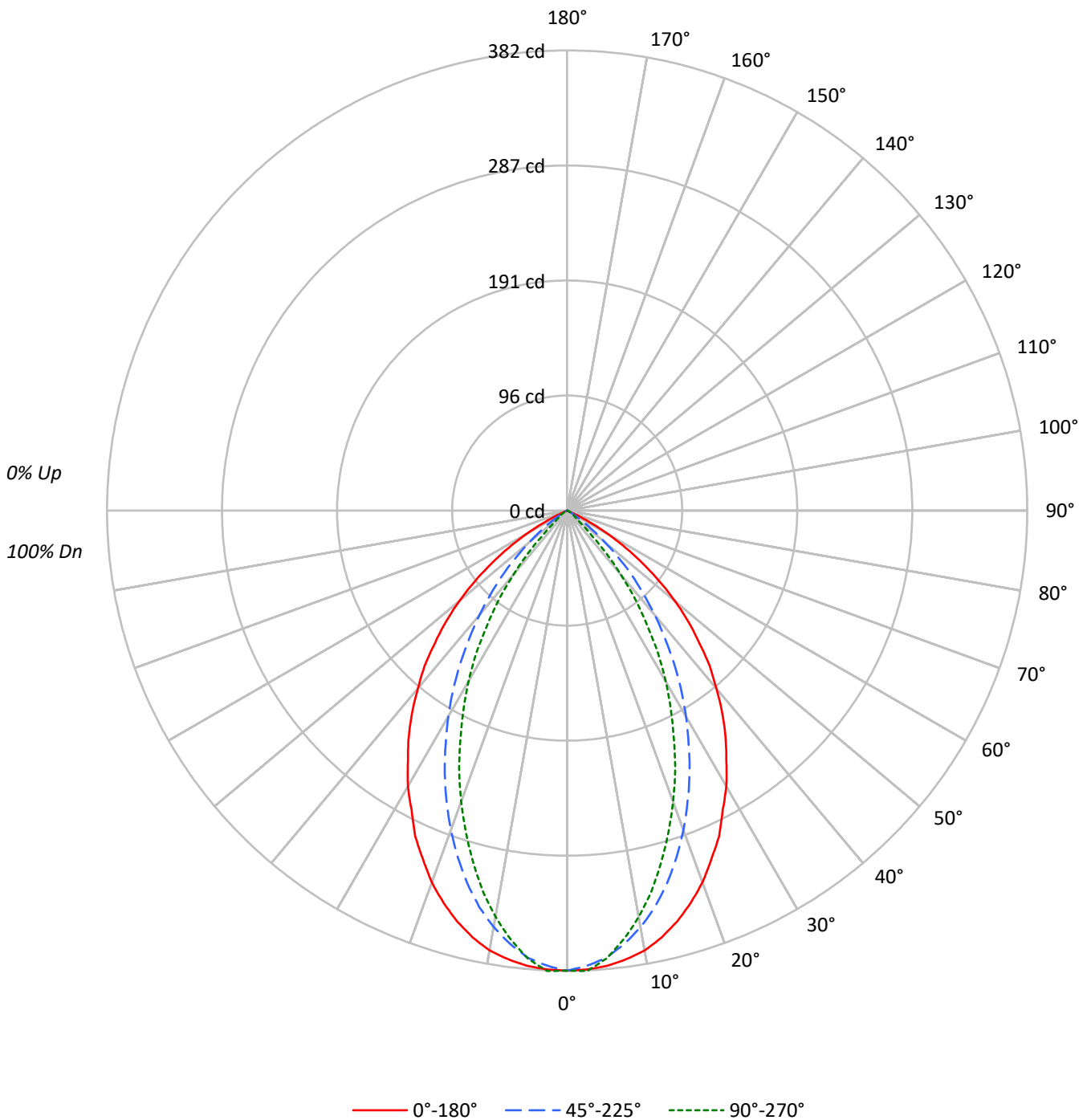
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 435.8 lumens  
Efficiency: N/A  
Efficacy: 22.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.6  
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	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°	4484	4484	4484
5°	4472	4393	4400
10°	4421	4186	4084
15°	4291	3895	3670
20°	4104	3528	3213
25°	3865	3116	2717
30°	3585	2677	2218
35°	3288	2213	1649
40°	2951	1735	1056
45°	2574	1267	438
50°	2134	753	168
55°	1574	315	125
60°	953	115	73
65°	256	69	33
70°	0	21	21
75°	0	0	27
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2574 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.2	8.1
10°-20°	90.7	20.8
20°-30°	113.1	25.9
30°-40°	101.1	23.2
40°-50°	63.8	14.6
50°-60°	26.7	6.1
60°-70°	5.0	1.2
70°-80°	0.2	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°	239.0	54.8
0°-40°	340.1	78.0
0°-60°	430.6	98.8
0°-90°	435.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	435.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	379	379	373	374	373	36
15°	353	344	320	307	302	99
25°	298	274	240	220	210	137
35°	229	196	154	127	115	143
45°	155	120	76	41	26	120
55°	77	53	15	6	6	69
65°	9	7	2	1	1	13
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	381.9	381.9	381.9	381.9	381.9
2.5°	381.3	381.9	378.2	381.9	382.5
5°	379.4	378.8	372.7	373.9	373.3
7.5°	375.7	373.9	362.8	360.4	359.1
10°	370.8	365.9	351.1	345.0	342.5
12.5°	362.8	356.1	337.0	327.2	323.5
15°	353.0	344.4	320.4	306.9	301.9
17.5°	341.3	329.0	301.9	287.2	279.8
20°	328.4	311.2	282.3	264.4	257.1
22.5°	313.0	294.0	261.4	242.3	234.3
25°	298.3	274.3	240.5	219.5	209.7
27.5°	279.8	254.6	218.3	196.8	186.3
30°	264.4	235.5	197.4	173.4	163.6
32.5°	246.0	215.9	175.9	149.4	140.2
35°	229.4	196.2	154.4	126.7	115.0
37.5°	211.5	177.1	132.8	103.9	92.9
40°	192.5	158.0	113.2	81.2	68.9
42.5°	175.3	139.0	93.5	60.3	48.0
45°	155.0	120.5	76.3	40.6	26.4
47.5°	136.5	103.3	57.8	22.8	14.1
50°	116.8	85.5	41.2	11.7	9.2
52.5°	96.6	68.3	27.1	8.0	7.4
55°	76.9	52.9	15.4	6.1	6.1
57.5°	57.8	38.1	8.0	4.9	4.3
60°	40.6	25.2	4.9	3.7	3.1
62.5°	23.4	14.8	3.7	2.5	2.5
65°	9.2	6.8	2.5	1.2	1.2
67.5°	0.6	1.8	1.2	0.6	0.6
70°	0.0	0.0	0.6	0.6	0.6
72.5°	0.0	0.0	0.6	0.6	0.6
75°	0.0	0.0	0.0	0.0	0.6
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	10.40	11.58	10.76	11.89	12.20	0.00	0.00	0.00	0.00	0.00
	3H	10.24	11.27	10.62	11.60	11.97	0.00	0.00	0.00	0.00	0.00
	4H	10.15	11.11	10.56	11.46	11.85	0.00	0.00	0.00	0.00	0.00
	6H	10.06	10.93	10.48	11.31	11.70	0.00	0.00	0.00	0.00	0.00
	8H	10.01	10.83	10.44	11.23	11.63	0.00	0.00	0.00	0.00	0.00
	12H	9.96	10.75	10.40	11.13	11.56	0.00	0.00	0.00	0.00	0.00
4H	2H	10.16	11.11	10.56	11.47	11.85	0.00	0.00	0.00	0.00	0.00
	3H	9.99	10.76	10.41	11.17	11.57	0.00	0.00	0.00	0.00	0.00
	4H	9.89	10.57	10.33	10.99	11.44	0.00	0.00	0.00	0.00	0.00
	6H	9.79	10.38	10.26	10.83	11.30	0.00	0.00	0.00	0.00	0.00
	8H	9.73	10.27	10.20	10.72	11.20	0.00	0.00	0.00	0.00	0.00
	12H	9.67	10.15	10.16	10.63	11.11	0.00	0.00	0.00	0.00	0.00
8H	4H	9.73	10.27	10.20	10.72	11.20	0.00	0.00	0.00	0.00	0.00
	6H	9.61	10.05	10.12	10.55	11.04	0.00	0.00	0.00	0.00	0.00
	8H	9.54	9.94	10.07	10.46	10.95	0.00	0.00	0.00	0.00	0.00
	12H	9.49	9.84	10.00	10.33	10.91	0.00	0.00	0.00	0.00	0.00
12H	4H	9.67	10.15	10.16	10.63	11.11	0.00	0.00	0.00	0.00	0.00
	6H	9.54	9.94	10.07	10.46	10.95	0.00	0.00	0.00	0.00	0.00
	8H	9.49	9.84	10.00	10.33	10.91	0.00	0.00	0.00	0.00	0.00