

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: P1059292

Luminaire Tested: S123RDRP-S560D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059292  
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-S560D930-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

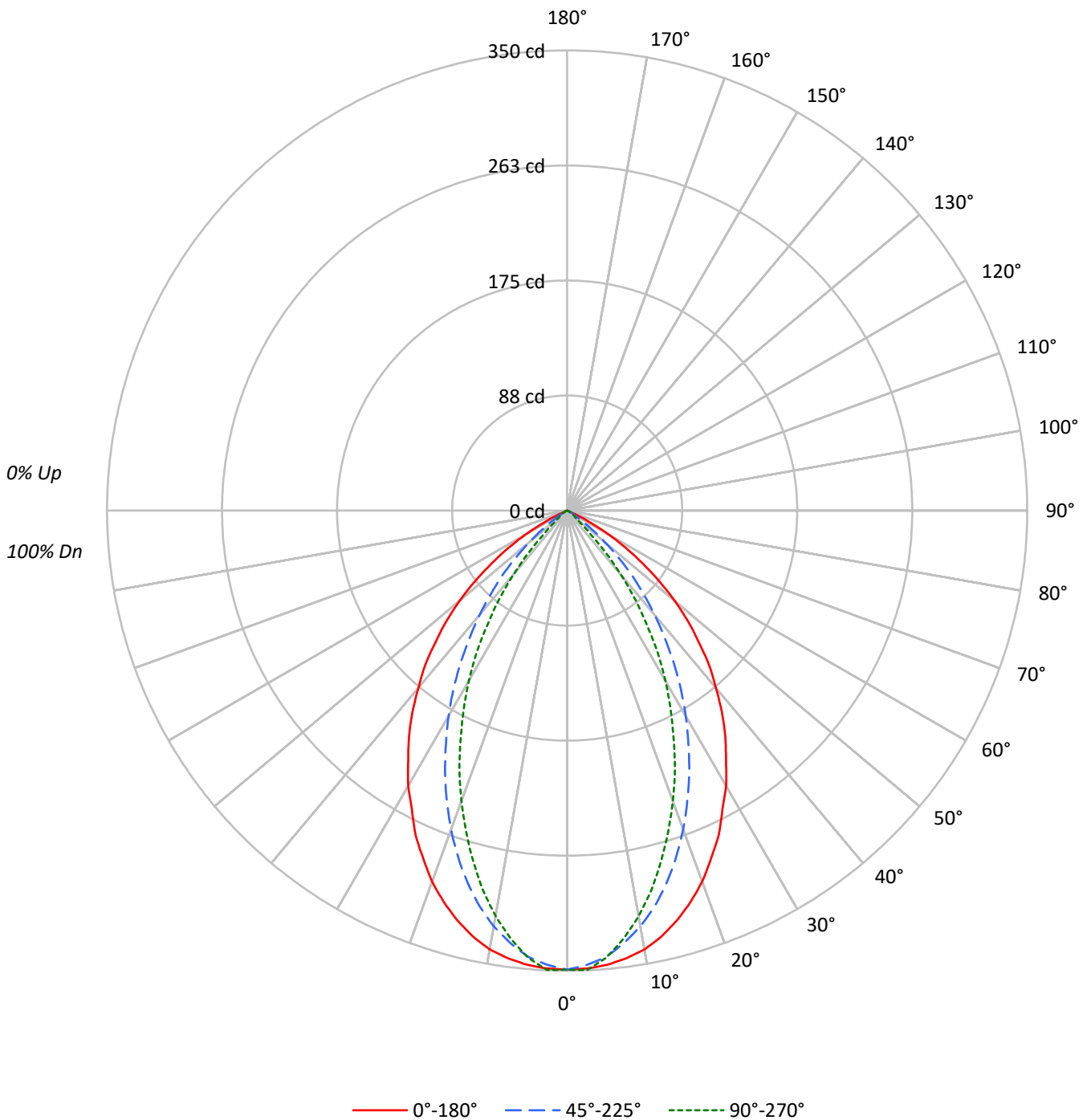
Lumens per Lamp: N/A  
Luminaire Lumens: 398.5 lumens  
Efficiency: N/A  
Efficacy: 20.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

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°	4100	4100	4100
5°	4089	4016	4023
10°	4042	3829	3734
15°	3923	3561	3356
20°	3753	3225	2937
25°	3533	2848	2484
30°	3279	2447	2028
35°	3006	2023	1507
40°	2698	1587	966
45°	2353	1157	402
50°	1951	689	153
55°	1439	289	115
60°	871	106	66
65°	233	61	31
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: 2353 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.1	8.1
10°-20°	83.0	20.8
20°-30°	103.4	25.9
30°-40°	92.4	23.2
40°-50°	58.3	14.6
50°-60°	24.4	6.1
60°-70°	4.6	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°	218.5	54.8
0°-40°	310.9	78.0
0°-60°	393.7	98.8
0°-90°	398.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	398.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	347	346	341	342	341	33
15°	323	315	293	281	276	91
25°	273	251	220	201	192	125
35°	210	179	141	116	105	131
45°	142	110	70	37	24	109
55°	70	48	14	6	6	63
65°	8	6	2	1	1	12
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°	349.2	349.2	349.2	349.2	349.2
2.5°	348.6	349.2	345.8	349.2	349.7
5°	346.9	346.4	340.7	341.9	341.3
7.5°	343.5	341.9	331.7	329.5	328.4
10°	339.0	334.6	321.1	315.4	313.2
12.5°	331.7	325.6	308.1	299.1	295.8
15°	322.7	314.9	292.9	280.6	276.1
17.5°	312.1	300.8	276.1	262.6	255.8
20°	300.3	284.5	258.1	241.8	235.0
22.5°	286.2	268.8	239.0	221.5	214.2
25°	272.7	250.8	219.8	200.7	191.7
27.5°	255.8	232.8	199.6	179.9	170.4
30°	241.8	215.3	180.5	158.6	149.6
32.5°	224.9	197.4	160.8	136.6	128.2
35°	209.7	179.4	141.1	115.8	105.1
37.5°	193.4	161.9	121.5	95.0	84.9
40°	176.0	144.5	103.5	74.2	63.0
42.5°	160.2	127.1	85.5	55.1	43.9
45°	141.7	110.2	69.7	37.1	24.2
47.5°	124.8	94.5	52.9	20.8	12.9
50°	106.8	78.2	37.7	10.7	8.4
52.5°	88.3	62.4	24.7	7.3	6.7
55°	70.3	48.4	14.1	5.6	5.6
57.5°	52.9	34.9	7.3	4.5	3.9
60°	37.1	23.1	4.5	3.4	2.8
62.5°	21.4	13.5	3.4	2.2	2.2
65°	8.4	6.2	2.2	1.1	1.1
67.5°	0.6	1.7	1.1	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	10.10	11.28	10.46	11.59	11.90	0.00	0.00	0.00	0.00	0.00
	3H	9.94	10.97	10.32	11.30	11.67	0.00	0.00	0.00	0.00	0.00
	4H	9.85	10.81	10.26	11.16	11.55	0.00	0.00	0.00	0.00	0.00
	6H	9.76	10.63	10.18	11.01	11.40	0.00	0.00	0.00	0.00	0.00
	8H	9.71	10.53	10.14	10.93	11.33	0.00	0.00	0.00	0.00	0.00
	12H	9.66	10.45	10.10	10.83	11.26	0.00	0.00	0.00	0.00	0.00
4H	2H	9.86	10.81	10.26	11.17	11.55	0.00	0.00	0.00	0.00	0.00
	3H	9.69	10.46	10.11	10.87	11.27	0.00	0.00	0.00	0.00	0.00
	4H	9.59	10.27	10.03	10.69	11.14	0.00	0.00	0.00	0.00	0.00
	6H	9.49	10.08	9.96	10.53	11.00	0.00	0.00	0.00	0.00	0.00
	8H	9.43	9.97	9.90	10.42	10.90	0.00	0.00	0.00	0.00	0.00
	12H	9.37	9.85	9.86	10.33	10.81	0.00	0.00	0.00	0.00	0.00
8H	4H	9.43	9.97	9.90	10.42	10.90	0.00	0.00	0.00	0.00	0.00
	6H	9.31	9.75	9.82	10.25	10.74	0.00	0.00	0.00	0.00	0.00
	8H	9.24	9.64	9.77	10.16	10.65	0.00	0.00	0.00	0.00	0.00
	12H	9.19	9.54	9.70	10.03	10.61	0.00	0.00	0.00	0.00	0.00
12H	4H	9.37	9.85	9.86	10.33	10.81	0.00	0.00	0.00	0.00	0.00
	6H	9.24	9.64	9.77	10.16	10.65	0.00	0.00	0.00	0.00	0.00
	8H	9.19	9.54	9.70	10.03	10.61	0.00	0.00	0.00	0.00	0.00