

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: P1059280

Luminaire Tested: S123RDRP-S560D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059280  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S560D850-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

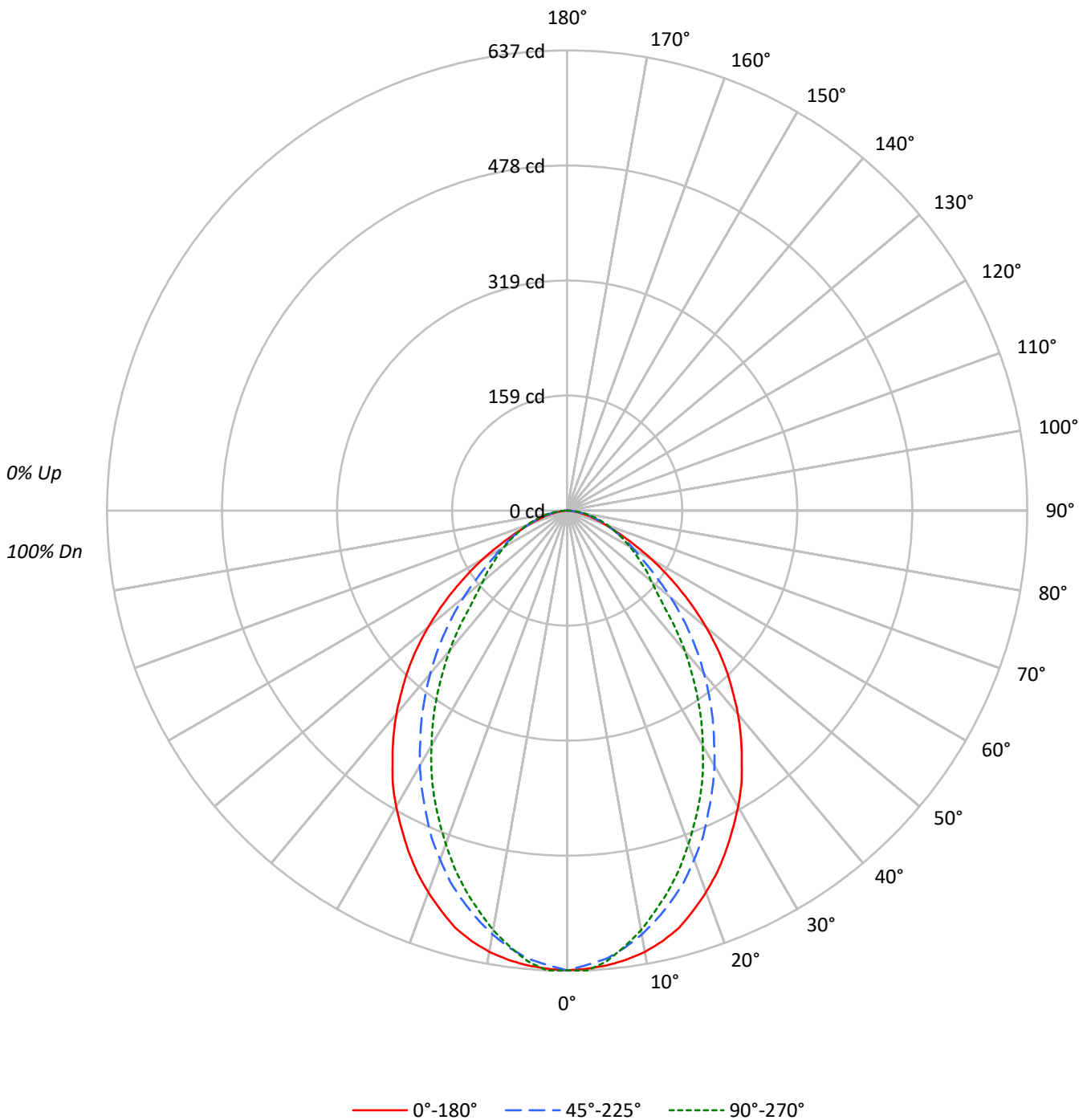
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1113.0 lumens  
Efficiency: N/A  
Efficacy: 56.8 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	7473	7473	7473
5°	7447	7339	7384
10°	7396	7104	7031
15°	7271	6797	6611
20°	7025	6423	6136
25°	6739	5986	5649
30°	6420	5528	5091
35°	6041	5033	4507
40°	5639	4514	3881
45°	5170	3989	3188
50°	4583	3423	2766
55°	3900	2866	2537
60°	3180	2496	2353
65°	2423	2209	2189
70°	1892	1971	2050
75°	1529	1769	1910
80°	1136	1447	1758
85°	620	930	1549

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5170 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.1	5.3
10°-20°	158.9	14.3
20°-30°	216.1	19.4
30°-40°	224.0	20.1
40°-50°	188.9	17.0
50°-60°	134.1	12.0
60°-70°	81.9	7.4
70°-80°	40.8	3.7
80°-90°	9.3	0.8
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°	434.1	39.0
0°-40°	658.0	59.1
0°-60°	981.0	88.1
0°-90°	1113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1113.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	636	636	636	636	636	
5°	632	632	623	626	626	60
15°	598	587	559	549	544	168
25°	520	497	462	445	436	239
35°	421	389	351	327	314	264
45°	311	278	240	207	192	239
55°	190	171	140	128	124	171
65°	87	84	80	80	79	89
75°	34	36	39	40	42	36
85°	5	5	7	10	12	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	636.4	636.4	636.4	636.4	636.4
2.5°	634.8	635.6	629.5	636.4	637.1
5°	631.8	631.8	622.6	626.4	626.4
7.5°	627.2	625.7	610.4	610.4	608.8
10°	620.3	615.7	595.8	592.0	589.7
12.5°	610.4	602.7	578.2	571.4	566.8
15°	598.1	586.7	559.1	549.2	543.8
17.5°	580.5	569.1	538.5	524.7	518.6
20°	562.2	545.4	514.0	500.2	491.0
22.5°	542.3	520.9	490.3	473.5	463.5
25°	520.1	497.2	462.0	445.2	436.0
27.5°	496.4	471.2	435.2	416.1	406.9
30°	473.5	444.4	407.7	386.3	375.5
32.5°	449.0	416.1	378.6	356.4	345.7
35°	421.4	389.3	351.1	326.6	314.4
37.5°	395.4	362.5	322.8	296.8	283.0
40°	367.9	335.0	294.5	267.7	253.2
42.5°	338.8	307.5	267.7	236.3	222.6
45°	311.3	278.4	240.2	207.3	192.0
47.5°	281.5	250.9	213.4	179.7	169.0
50°	250.9	222.6	187.4	156.8	151.4
52.5°	221.0	197.3	161.4	141.5	139.2
55°	190.5	170.6	140.0	127.7	123.9
57.5°	162.2	147.6	120.1	114.0	112.4
60°	135.4	123.1	106.3	102.5	100.2
62.5°	109.4	102.5	92.5	91.0	89.5
65°	87.2	84.1	79.5	79.5	78.8
67.5°	68.8	68.8	68.1	69.6	68.8
70°	55.1	55.8	57.4	58.9	59.7
72.5°	43.6	45.9	47.4	49.7	50.5
75°	33.7	35.9	39.0	40.5	42.1
77.5°	24.5	26.8	29.8	32.1	33.7
80°	16.8	18.4	21.4	24.5	26.0
82.5°	10.7	11.5	13.8	16.8	18.4
85°	4.6	5.4	6.9	9.9	11.5
87.5°	0.0	0.0	0.8	3.1	5.4
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	15.80	17.25	16.16	17.56	17.87	13.89	15.34	14.26	15.66	15.97
	3H	16.69	17.99	17.07	18.32	18.68	15.47	16.76	15.85	17.09	17.45
	4H	16.98	18.19	17.38	18.54	18.92	16.06	17.28	16.46	17.62	18.00
	6H	17.13	18.24	17.54	18.61	19.00	16.51	17.63	16.93	18.00	18.39
	8H	17.15	18.21	17.58	18.60	19.00	16.66	17.73	17.09	18.12	18.52
	12H	17.14	18.16	17.57	18.54	18.97	16.76	17.78	17.19	18.16	18.59
4H	2H	16.04	17.25	16.44	17.60	17.98	14.44	15.65	14.84	16.00	16.38
	3H	17.15	18.15	17.56	18.55	18.96	16.21	17.21	16.62	17.61	18.01
	4H	17.54	18.44	17.98	18.86	19.30	16.92	17.82	17.35	18.24	18.68
	6H	17.78	18.56	18.24	19.01	19.47	17.49	18.27	17.95	18.72	19.18
	8H	17.83	18.56	18.29	19.00	19.47	17.68	18.41	18.15	18.86	19.33
	12H	17.84	18.48	18.32	18.96	19.44	17.82	18.47	18.31	18.95	19.42
8H	4H	17.70	18.43	18.17	18.87	19.34	17.13	17.86	17.59	18.30	18.77
	6H	18.01	18.61	18.51	19.11	19.58	17.81	18.40	18.30	18.90	19.38
	8H	18.09	18.63	18.61	19.14	19.63	18.06	18.60	18.58	19.11	19.60
	12H	18.13	18.60	18.64	19.09	19.66	18.27	18.75	18.78	19.24	19.81
12H	4H	17.70	18.35	18.19	18.83	19.30	17.13	17.77	17.61	18.25	18.73
	6H	18.03	18.57	18.54	19.08	19.57	17.81	18.35	18.33	18.86	19.35
	8H	18.14	18.62	18.65	19.11	19.68	18.12	18.59	18.63	19.09	19.65