

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: P1059703

Luminaire Tested: S123RDR-H560D930-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059703  
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: S123RDR-H560D930-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

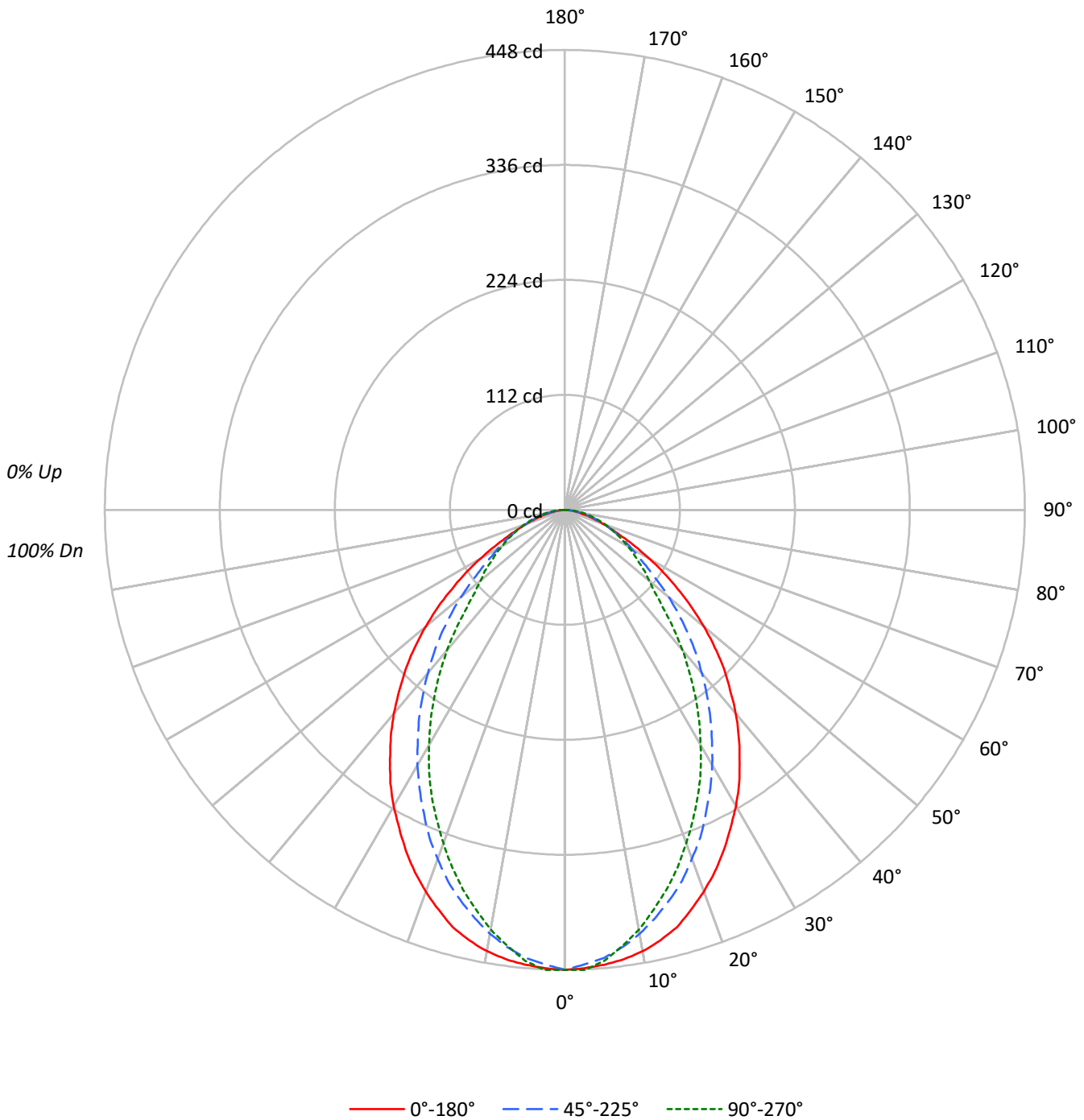
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 783.5 lumens  
Efficiency: N/A  
Efficacy: 45.0 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): 17.4  
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	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°	5261	5261	5261
5°	5242	5166	5198
10°	5206	5001	4949
15°	5118	4785	4654
20°	4945	4521	4320
25°	4743	4213	3976
30°	4519	3891	3585
35°	4253	3542	3172
40°	3970	3178	2732
45°	3638	2808	2244
50°	3226	2410	1947
55°	2745	2017	1785
60°	2238	1757	1656
65°	1706	1556	1542
70°	1332	1387	1442
75°	1075	1248	1343
80°	798	1021	1237
85°	431	647	1091

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3638 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.6	5.3
10°-20°	111.9	14.3
20°-30°	152.1	19.4
30°-40°	157.7	20.1
40°-50°	133.0	17.0
50°-60°	94.4	12.0
60°-70°	57.7	7.4
70°-80°	28.7	3.7
80°-90°	6.5	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°	305.6	39.0
0°-40°	463.2	59.1
0°-60°	690.6	88.1
0°-90°	783.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	783.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	448	448	448	448	448	
5°	445	445	438	441	441	42
15°	421	413	394	387	383	118
25°	366	350	325	313	307	168
35°	297	274	247	230	221	186
45°	219	196	169	146	135	168
55°	134	120	98	90	87	120
65°	61	59	56	56	56	63
75°	24	25	28	28	30	26
85°	3	4	5	7	8	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	448.0	448.0	448.0	448.0	448.0
2.5°	446.9	447.4	443.1	448.0	448.5
5°	444.7	444.7	438.3	441.0	441.0
7.5°	441.5	440.4	429.6	429.6	428.6
10°	436.6	433.4	419.4	416.7	415.1
12.5°	429.6	424.3	407.0	402.2	399.0
15°	421.0	413.0	393.6	386.6	382.8
17.5°	408.6	400.6	379.0	369.3	365.0
20°	395.7	383.9	361.8	352.1	345.7
22.5°	381.7	366.7	345.1	333.3	326.3
25°	366.1	350.0	325.2	313.4	306.9
27.5°	349.4	331.7	306.4	292.9	286.4
30°	333.3	312.8	287.0	271.9	264.4
32.5°	316.0	292.9	266.5	250.9	243.4
35°	296.7	274.0	247.1	229.9	221.3
37.5°	278.4	255.2	227.2	208.9	199.2
40°	259.0	235.8	207.3	188.4	178.2
42.5°	238.5	216.4	188.4	166.4	156.7
45°	219.1	196.0	169.1	145.9	135.1
47.5°	198.1	176.6	150.2	126.5	119.0
50°	176.6	156.7	131.9	110.4	106.6
52.5°	155.6	138.9	113.6	99.6	98.0
55°	134.1	120.1	98.5	89.9	87.2
57.5°	114.1	103.9	84.5	80.2	79.1
60°	95.3	86.7	74.8	72.1	70.5
62.5°	77.0	72.1	65.1	64.1	63.0
65°	61.4	59.2	56.0	56.0	55.5
67.5°	48.5	48.5	47.9	49.0	48.5
70°	38.8	39.3	40.4	41.5	42.0
72.5°	30.7	32.3	33.4	35.0	35.5
75°	23.7	25.3	27.5	28.5	29.6
77.5°	17.2	18.8	21.0	22.6	23.7
80°	11.8	12.9	15.1	17.2	18.3
82.5°	7.5	8.1	9.7	11.8	12.9
85°	3.2	3.8	4.8	7.0	8.1
87.5°	0.0	0.0	0.5	2.2	3.8
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	14.58	16.03	14.94	16.34	16.65	12.67	14.12	13.04	14.43	14.75
	3H	15.47	16.77	15.85	17.10	17.46	14.25	15.54	14.63	15.87	16.23
	4H	15.76	16.97	16.16	17.32	17.70	14.84	16.05	15.24	16.40	16.78
	6H	15.91	17.02	16.32	17.39	17.78	15.29	16.41	15.71	16.78	17.17
	8H	15.93	16.99	16.36	17.38	17.78	15.44	16.50	15.87	16.89	17.30
	12H	15.92	16.94	16.35	17.32	17.75	15.54	16.56	15.97	16.94	17.37
4H	2H	14.82	16.03	15.22	16.38	16.76	13.21	14.43	13.61	14.77	15.16
	3H	15.93	16.94	16.35	17.34	17.74	14.99	15.99	15.40	16.39	16.79
	4H	16.33	17.22	16.76	17.64	18.08	15.70	16.60	16.13	17.02	17.46
	6H	16.56	17.34	17.02	17.79	18.25	16.27	17.05	16.73	17.49	17.96
	8H	16.61	17.33	17.07	17.78	18.25	16.46	17.19	16.93	17.63	18.10
	12H	16.62	17.26	17.10	17.74	18.22	16.60	17.25	17.08	17.73	18.20
8H	4H	16.48	17.21	16.95	17.66	18.12	15.91	16.64	16.38	17.08	17.55
	6H	16.79	17.39	17.29	17.89	18.36	16.58	17.18	17.08	17.68	18.16
	8H	16.87	17.41	17.39	17.92	18.41	16.84	17.38	17.36	17.89	18.38
	12H	16.90	17.38	17.42	17.87	18.44	17.05	17.52	17.56	18.02	18.58
12H	4H	16.49	17.13	16.97	17.61	18.09	15.91	16.55	16.39	17.03	17.51
	6H	16.81	17.35	17.33	17.86	18.35	16.59	17.13	17.11	17.64	18.13
	8H	16.92	17.40	17.43	17.89	18.46	16.90	17.37	17.41	17.86	18.43