

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: P1059648

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059648  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D950-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

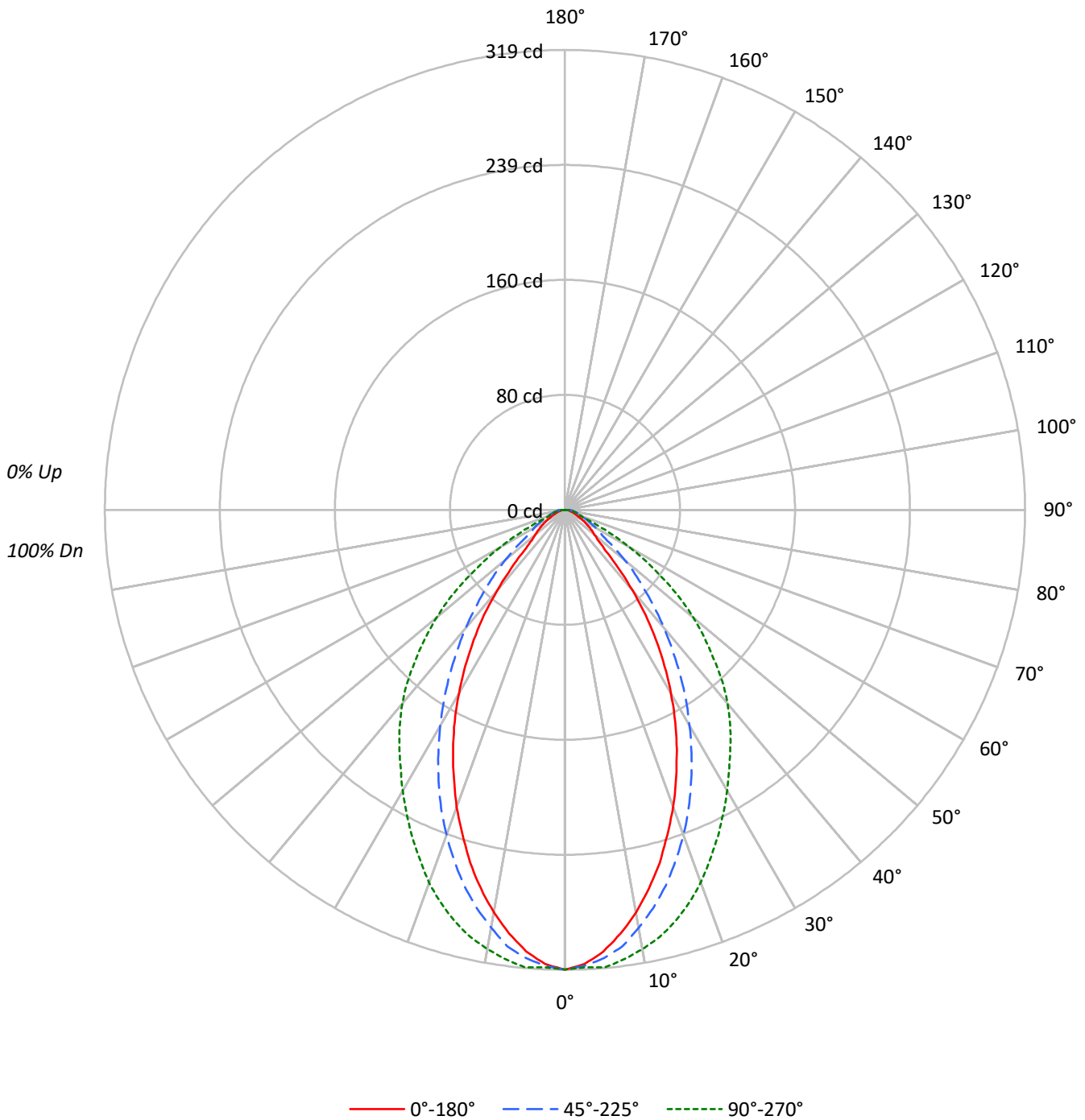
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 428.1 lumens  
Efficiency: N/A  
Efficacy: 36.6 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98  
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	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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				

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

	0°	45°	90°
0°	3745	3745	3745
5°	3623	3679	3754
10°	3382	3509	3689
15°	3082	3280	3592
20°	2743	3000	3440
25°	2376	2685	3244
30°	1993	2342	3051
35°	1578	1993	2867
40°	1117	1640	2690
45°	658	1295	2421
50°	491	985	2121
55°	414	665	1703
60°	336	568	1209
65°	264	483	639
70°	230	422	395
75°	218	395	377
80°	216	426	372
85°	269	647	485

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2421 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.3	6.9
10°-20°	76.3	17.8
20°-30°	97.1	22.7
30°-40°	91.4	21.3
40°-50°	65.8	15.4
50°-60°	38.0	8.9
60°-70°	17.4	4.1
70°-80°	8.7	2.0
80°-90°	4.1	1.0
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°	202.8	47.4
0°-40°	294.1	68.7
0°-60°	397.9	93.0
0°-90°	428.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	428.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	319	319	319	319	319	
5°	307	312	312	315	318	29
15°	254	263	270	285	296	71
25°	183	193	207	230	250	84
35°	110	120	139	171	200	68
45°	40	50	78	117	146	33
55°	20	21	32	62	83	18
65°	10	14	17	19	23	10
75°	5	9	9	8	8	5
85°	2	4	5	4	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	318.9	318.9	318.9	318.9	318.9
2.5°	315.3	319.3	316.5	316.9	317.7
5°	307.4	312.5	312.1	315.3	318.5
7.5°	296.3	302.2	305.4	310.2	314.5
10°	283.6	290.4	294.3	303.0	309.4
12.5°	269.0	277.7	282.8	294.3	303.4
15°	253.5	262.6	269.8	284.8	295.5
17.5°	236.1	246.0	255.1	272.9	286.0
20°	219.5	229.0	240.1	259.5	275.3
22.5°	201.2	211.5	224.2	244.8	262.6
25°	183.4	192.9	207.2	230.2	250.4
27.5°	165.6	175.1	190.1	215.5	237.7
30°	147.0	156.9	172.7	200.8	225.0
32.5°	128.7	138.2	156.1	186.6	211.9
35°	110.1	119.6	139.0	171.1	200.0
37.5°	91.9	101.8	122.4	158.5	188.2
40°	72.9	83.6	107.0	145.4	175.5
42.5°	55.1	66.5	91.5	131.9	161.6
45°	39.6	49.5	78.0	117.3	145.8
47.5°	30.9	36.0	65.8	102.2	131.1
50°	26.9	27.7	53.9	88.3	116.1
52.5°	23.4	24.2	42.4	75.3	100.2
55°	20.2	21.0	32.5	61.8	83.2
57.5°	17.0	18.2	26.9	49.1	66.9
60°	14.3	15.8	24.2	37.6	51.5
62.5°	11.5	14.3	20.6	27.7	36.8
65°	9.5	13.5	17.4	19.4	23.0
67.5°	7.9	12.3	14.7	13.9	13.5
70°	6.7	11.1	12.3	11.1	11.5
72.5°	5.5	10.3	10.3	9.5	9.5
75°	4.8	9.1	8.7	8.3	8.3
77.5°	4.0	7.9	7.5	7.1	6.7
80°	3.2	6.3	6.3	5.9	5.5
82.5°	2.8	5.1	5.1	5.1	4.4
85°	2.0	4.4	4.8	4.4	3.6
87.5°	1.6	4.0	4.0	3.6	2.4
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	4.55	5.87	4.91	6.18	6.49	11.92	13.24	12.28	13.55	13.86
	3H	5.94	7.11	6.32	7.44	7.80	12.15	13.32	12.53	13.65	14.01
	4H	6.49	7.59	6.90	7.94	8.32	12.26	13.35	12.67	13.70	14.09
	6H	6.93	7.94	7.35	8.31	8.70	12.38	13.38	12.79	13.75	14.14
	8H	7.11	8.06	7.54	8.45	8.86	12.43	13.38	12.86	13.77	14.17
	12H	7.27	8.18	7.70	8.56	8.99	12.49	13.40	12.92	13.78	14.21
4H	2H	5.65	6.74	6.05	7.09	7.47	11.87	12.97	12.28	13.32	13.70
	3H	7.31	8.21	7.73	8.61	9.01	12.24	13.13	12.65	13.53	13.94
	4H	8.13	8.92	8.56	9.34	9.79	12.43	13.23	12.87	13.65	14.09
	6H	8.76	9.45	9.22	9.90	10.37	12.66	13.35	13.12	13.79	14.26
	8H	9.00	9.64	9.47	10.09	10.56	12.76	13.41	13.23	13.85	14.32
	12H	9.21	9.79	9.70	10.27	10.74	12.89	13.46	13.38	13.95	14.42
8H	4H	8.57	9.21	9.03	9.66	10.13	12.47	13.12	12.94	13.56	14.03
	6H	9.47	10.00	9.98	10.50	10.98	12.79	13.32	13.30	13.82	14.30
	8H	9.89	10.37	10.41	10.88	11.37	12.98	13.46	13.50	13.97	14.47
	12H	10.31	10.74	10.83	11.23	11.80	13.24	13.66	13.75	14.15	14.72
12H	4H	8.62	9.19	9.11	9.68	10.15	12.46	13.03	12.95	13.51	13.99
	6H	9.61	10.08	10.13	10.60	11.09	12.81	13.29	13.33	13.80	14.29
	8H	10.14	10.56	10.66	11.06	11.63	13.06	13.49	13.58	13.98	14.55