

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: P1059646

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059646  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
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-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

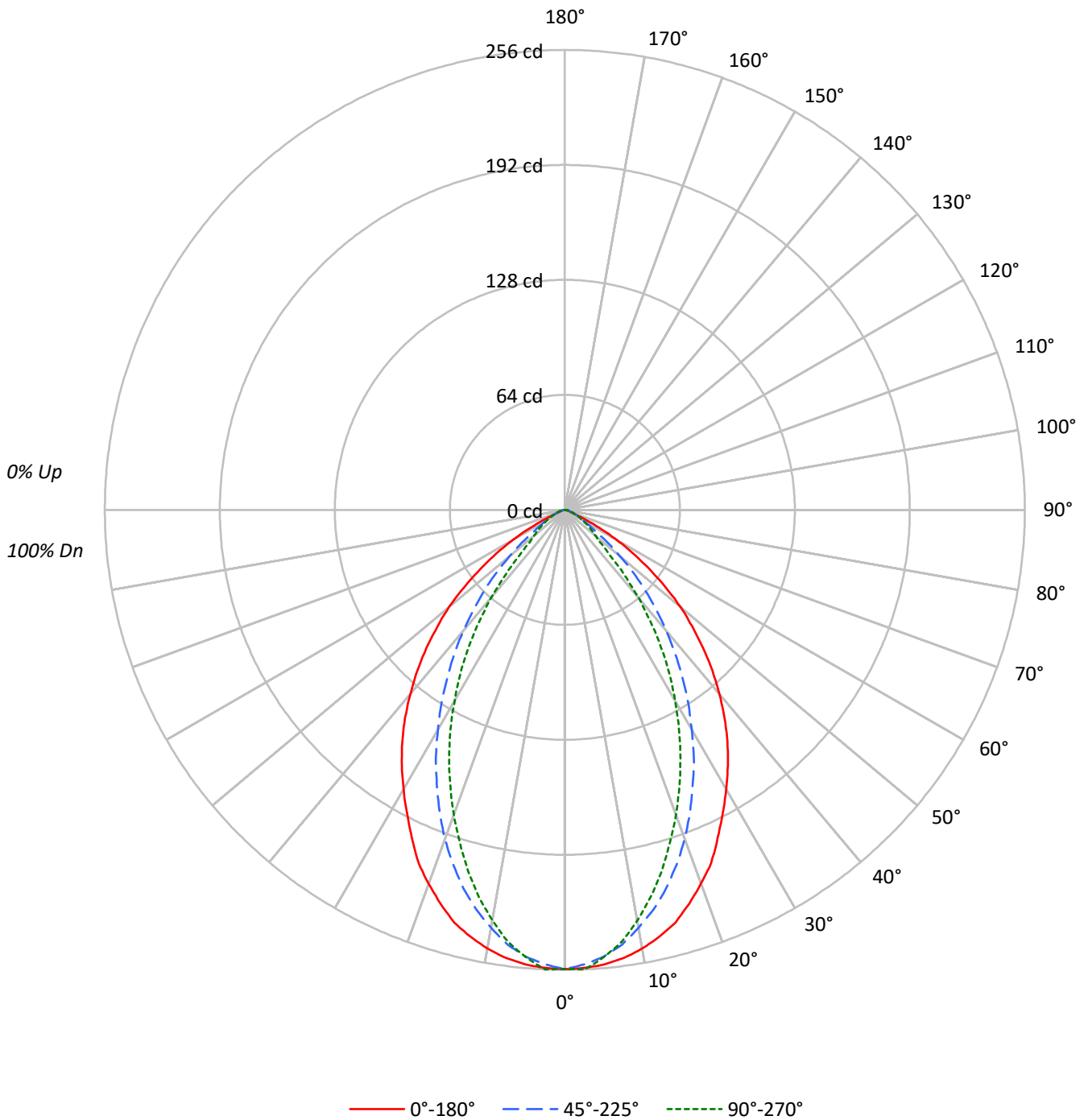
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 329.9 lumens  
Efficiency: N/A  
Efficacy: 28.2 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	3001	3001	3001
5°	2994	2942	2947
10°	2957	2816	2769
15°	2891	2650	2530
20°	2768	2437	2259
25°	2609	2183	1973
30°	2435	1915	1662
35°	2262	1633	1339
40°	2049	1346	970
45°	1807	1045	585
50°	1533	731	398
55°	1167	438	332
60°	761	279	261
65°	320	208	208
70°	110	151	161
75°	91	109	127
80°	54	81	108
85°	54	54	108

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1807 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.6	7.2
10°-20°	61.8	18.7
20°-30°	79.2	24.0
30°-40°	74.3	22.5
40°-50°	51.9	15.7
50°-60°	26.8	8.1
60°-70°	9.2	2.8
70°-80°	2.6	0.8
80°-90°	0.6	0.2
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°	164.6	49.9
0°-40°	238.9	72.4
0°-60°	317.6	96.3
0°-90°	329.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	329.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	254	254	250	251	250	24
15°	238	232	218	211	208	67
25°	201	189	168	157	152	93
35°	158	138	114	99	93	98
45°	109	89	63	44	35	84
55°	57	43	21	17	16	51
65°	12	10	8	7	8	14
75°	2	2	2	3	3	2
85°	0	0	0	0	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	255.6	255.6	255.6	255.6	255.6
2.5°	255.2	255.6	253.2	255.6	256.0
5°	254.0	253.6	249.6	250.8	250.0
7.5°	251.6	250.4	244.1	242.5	242.5
10°	248.0	245.7	236.2	233.4	232.2
12.5°	243.3	240.1	227.9	222.7	220.8
15°	237.8	231.8	218.0	210.9	208.1
17.5°	229.9	221.9	206.9	198.6	194.2
20°	221.5	211.7	195.0	185.1	180.8
22.5°	212.8	201.0	182.0	171.3	166.6
25°	201.4	188.7	168.5	157.1	152.3
27.5°	190.3	176.8	155.5	142.4	137.7
30°	179.6	163.8	141.2	128.6	122.6
32.5°	168.9	151.1	127.8	113.9	108.4
35°	157.8	138.5	113.9	99.3	93.4
37.5°	146.0	126.2	100.9	85.1	77.9
40°	133.7	113.1	87.8	70.0	63.3
42.5°	121.5	101.3	74.8	56.6	48.7
45°	108.8	89.0	62.9	43.5	35.2
47.5°	96.1	76.7	51.4	31.6	26.5
50°	83.9	65.3	40.0	23.3	21.8
52.5°	70.4	54.2	30.1	19.4	19.0
55°	57.0	42.7	21.4	16.6	16.2
57.5°	45.1	33.2	15.4	13.8	13.5
60°	32.4	23.7	11.9	11.5	11.1
62.5°	21.4	16.2	9.5	9.1	9.1
65°	11.5	9.9	7.5	7.1	7.5
67.5°	4.7	5.5	5.5	5.9	5.9
70°	3.2	3.6	4.4	4.7	4.7
72.5°	2.4	2.8	3.2	3.6	3.6
75°	2.0	2.0	2.4	2.8	2.8
77.5°	1.2	1.6	1.6	2.0	2.4
80°	0.8	1.2	1.2	1.6	1.6
82.5°	0.4	0.8	0.8	1.2	1.2
85°	0.4	0.4	0.4	0.4	0.8
87.5°	0.0	0.0	0.0	0.0	0.4
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	10.15	11.40	10.51	11.72	12.03	3.64	4.90	4.01	5.22	5.53
	3H	10.10	11.21	10.48	11.54	11.90	4.41	5.52	4.79	5.85	6.21
	4H	10.05	11.08	10.45	11.43	11.81	4.62	5.65	5.02	6.00	6.39
	6H	9.98	10.92	10.39	11.29	11.69	4.77	5.71	5.18	6.08	6.48
	8H	9.93	10.82	10.36	11.22	11.62	4.81	5.70	5.24	6.09	6.50
	12H	9.89	10.74	10.32	11.12	11.56	4.83	5.68	5.26	6.06	6.49
4H	2H	9.99	11.02	10.40	11.37	11.76	3.90	4.93	4.30	5.28	5.67
	3H	9.98	10.81	10.39	11.22	11.62	4.80	5.64	5.22	6.04	6.45
	4H	9.93	10.67	10.36	11.09	11.53	5.08	5.83	5.52	6.25	6.69
	6H	9.87	10.51	10.34	10.96	11.42	5.31	5.95	5.77	6.39	6.86
	8H	9.82	10.41	10.29	10.86	11.33	5.37	5.97	5.84	6.41	6.89
	12H	9.77	10.30	10.26	10.78	11.26	5.41	5.94	5.90	6.42	6.90
8H	4H	9.81	10.41	10.29	10.86	11.33	5.07	5.67	5.54	6.11	6.59
	6H	9.75	10.24	10.26	10.73	11.22	5.35	5.83	5.85	6.33	6.81
	8H	9.70	10.14	10.23	10.65	11.15	5.46	5.89	5.98	6.41	6.91
	12H	9.66	10.05	10.18	10.55	11.12	5.54	5.92	6.05	6.42	6.99
12H	4H	9.77	10.29	10.26	10.78	11.25	5.03	5.56	5.52	6.04	6.52
	6H	9.70	10.13	10.22	10.65	11.14	5.31	5.75	5.84	6.26	6.76
	8H	9.67	10.05	10.18	10.55	11.12	5.45	5.84	5.97	6.33	6.91