

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: P1059572

Luminaire Tested: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

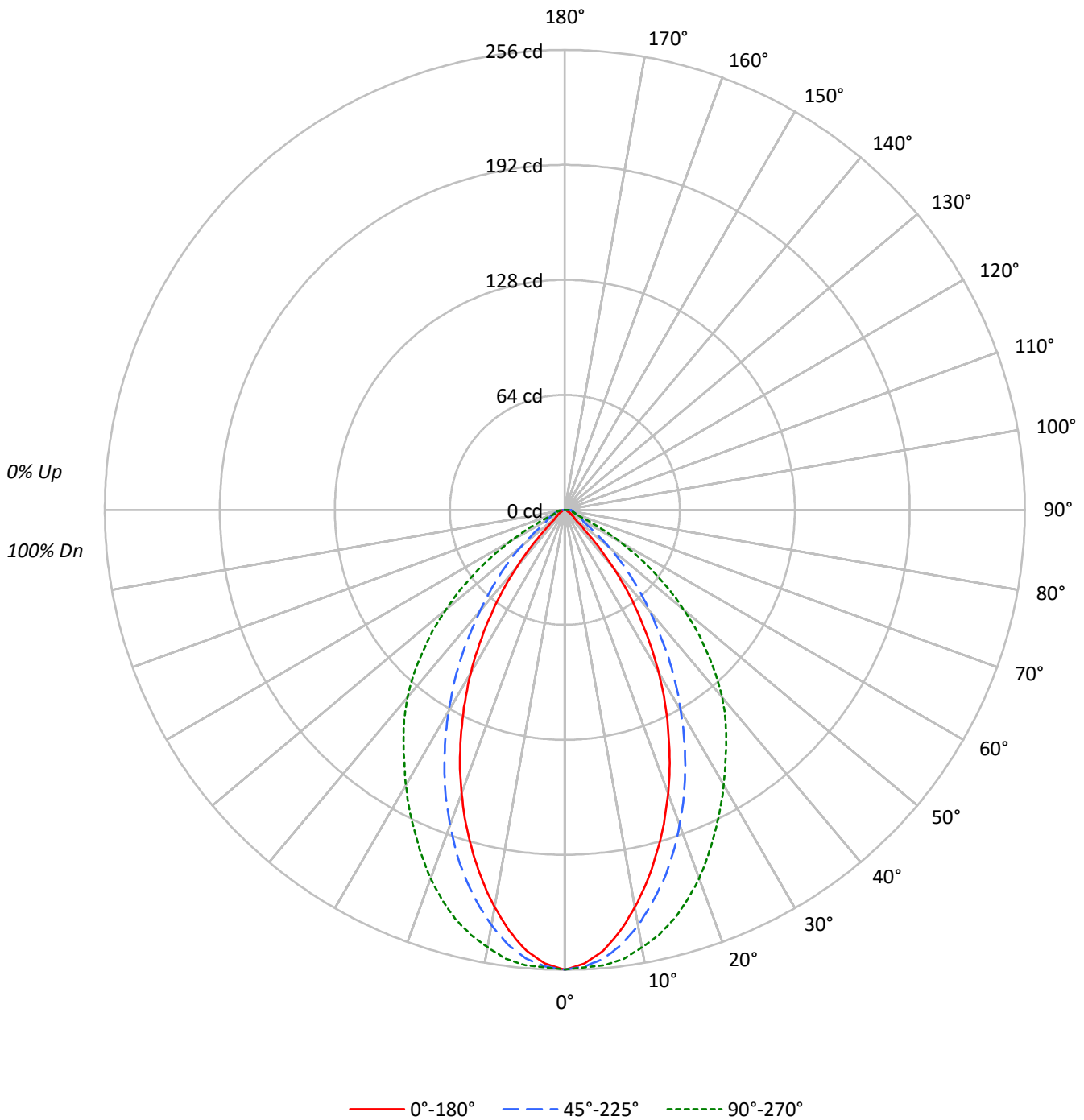
Test Method: LM-79-2019  
Report Number: P1059572  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D830-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 307.5 lumens  
Efficiency: N/A  
Efficacy: 26.3 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
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

TEST NUMBER: P1059572  
CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1059572

CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

**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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				

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

	0°	45°	90°
0°	3005	3005	3005
5°	2902	2953	2999
10°	2678	2800	2949
15°	2402	2588	2864
20°	2098	2333	2729
25°	1765	2054	2560
30°	1417	1750	2399
35°	1038	1442	2243
40°	642	1122	2088
45°	247	845	1858
50°	122	579	1573
55°	96	321	1234
60°	63	265	827
65°	56	239	370
70°	55	216	216
75°	73	231	213
80°	108	291	237
85°	162	472	310

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1858 cd/sqm



TEST NUMBER: P1059572

CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	7.6
10°-20°	60.1	19.5
20°-30°	74.6	24.3
30°-40°	66.8	21.7
40°-50°	43.9	14.3
50°-60°	22.0	7.2
60°-70°	8.7	2.8
70°-80°	4.9	1.6
80°-90°	3.0	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°	158.1	51.4
0°-40°	224.9	73.2
0°-60°	290.8	94.6
0°-90°	307.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	307.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	246	250	250	252	254	23
15°	198	204	213	227	236	55
25°	136	145	158	181	198	62
35°	72	82	101	132	156	45
45°	15	25	51	86	112	14
55°	5	6	16	42	60	4
65°	2	6	9	11	13	2
75°	2	5	5	5	5	2
85°	1	4	4	4	2	1
90°	0	0	0	0	0	



TEST NUMBER: P1059572

CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	255.9	255.9	255.9	255.9	255.9
2.5°	252.8	256.3	254.4	254.4	254.8
5°	246.2	250.1	250.5	252.0	254.4
7.5°	236.4	241.5	243.8	248.5	252.0
10°	224.6	230.1	234.8	243.0	247.3
12.5°	211.7	217.2	224.2	235.6	242.2
15°	197.6	203.9	212.9	227.4	235.6
17.5°	183.2	189.4	200.4	216.8	227.4
20°	167.9	174.9	186.7	205.5	218.4
22.5°	152.6	160.5	173.0	193.3	208.2
25°	136.2	144.8	158.5	180.8	197.6
27.5°	120.5	129.5	144.0	168.3	187.5
30°	104.5	113.5	129.1	155.4	176.9
32.5°	88.1	98.2	114.7	143.2	166.3
35°	72.4	82.2	100.6	131.5	156.5
37.5°	57.1	66.9	86.1	120.1	146.8
40°	41.9	52.1	73.2	109.2	136.2
42.5°	27.4	38.0	61.8	98.2	124.5
45°	14.9	24.7	50.9	85.7	111.9
47.5°	8.2	13.3	41.1	74.0	99.8
50°	6.7	7.4	31.7	63.0	86.1
52.5°	5.5	6.3	22.7	52.4	73.6
55°	4.7	5.5	15.7	42.3	60.3
57.5°	3.9	4.7	12.5	32.5	47.4
60°	2.7	4.7	11.3	23.9	35.2
62.5°	2.3	4.7	9.8	16.4	23.5
65°	2.0	5.5	8.6	11.0	13.3
67.5°	1.6	5.5	7.4	7.0	7.0
70°	1.6	5.5	6.3	5.9	6.3
72.5°	1.6	5.9	5.9	5.5	5.5
75°	1.6	5.1	5.1	4.7	4.7
77.5°	1.6	4.7	4.7	4.3	4.3
80°	1.6	4.3	4.3	3.9	3.5
82.5°	1.6	3.9	3.9	3.5	3.1
85°	1.2	3.5	3.5	3.5	2.3
87.5°	1.2	3.1	3.5	3.1	2.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059572  
 CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-S

**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	0.00	0.00	0.00	0.00	0.00	10.37	11.63	10.74	11.94	12.26
	3H	0.00	0.00	0.00	0.28	0.64	10.45	11.56	10.83	11.90	12.26
	4H	0.01	1.05	0.42	1.40	1.78	10.52	11.55	10.92	11.90	12.29
	6H	1.07	2.02	1.49	2.40	2.79	10.61	11.56	11.03	11.93	12.33
	8H	1.62	2.52	2.05	2.91	3.32	10.67	11.57	11.10	11.96	12.37
	12H	2.11	2.97	2.54	3.35	3.78	10.74	11.60	11.17	11.98	12.41
4H	2H	0.00	0.57	0.00	0.93	1.31	10.23	11.27	10.64	11.62	12.01
	3H	2.02	2.87	2.44	3.28	3.68	10.41	11.25	10.82	11.66	12.06
	4H	3.37	4.13	3.81	4.55	5.00	10.54	11.29	10.97	11.71	12.16
	6H	4.51	5.16	4.97	5.61	6.08	10.75	11.40	11.21	11.85	12.32
	8H	5.02	5.63	5.49	6.08	6.55	10.87	11.48	11.34	11.93	12.40
	12H	5.48	6.02	5.97	6.50	6.98	11.03	11.57	11.51	12.05	12.52
8H	4H	4.29	4.90	4.76	5.35	5.82	10.54	11.15	11.01	11.60	12.07
	6H	5.88	6.38	6.39	6.88	7.36	10.87	11.37	11.37	11.86	12.35
	8H	6.71	7.16	7.23	7.67	8.17	11.09	11.54	11.61	12.06	12.55
	12H	7.49	7.88	8.00	8.38	8.95	11.41	11.81	11.92	12.30	12.88
12H	4H	4.45	4.99	4.94	5.48	5.95	10.53	11.07	11.02	11.55	12.03
	6H	6.20	6.65	6.72	7.16	7.66	10.90	11.35	11.42	11.86	12.36
	8H	7.20	7.60	7.72	8.09	8.67	11.20	11.60	11.72	12.10	12.67