

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: P1059644

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059644
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-H340D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

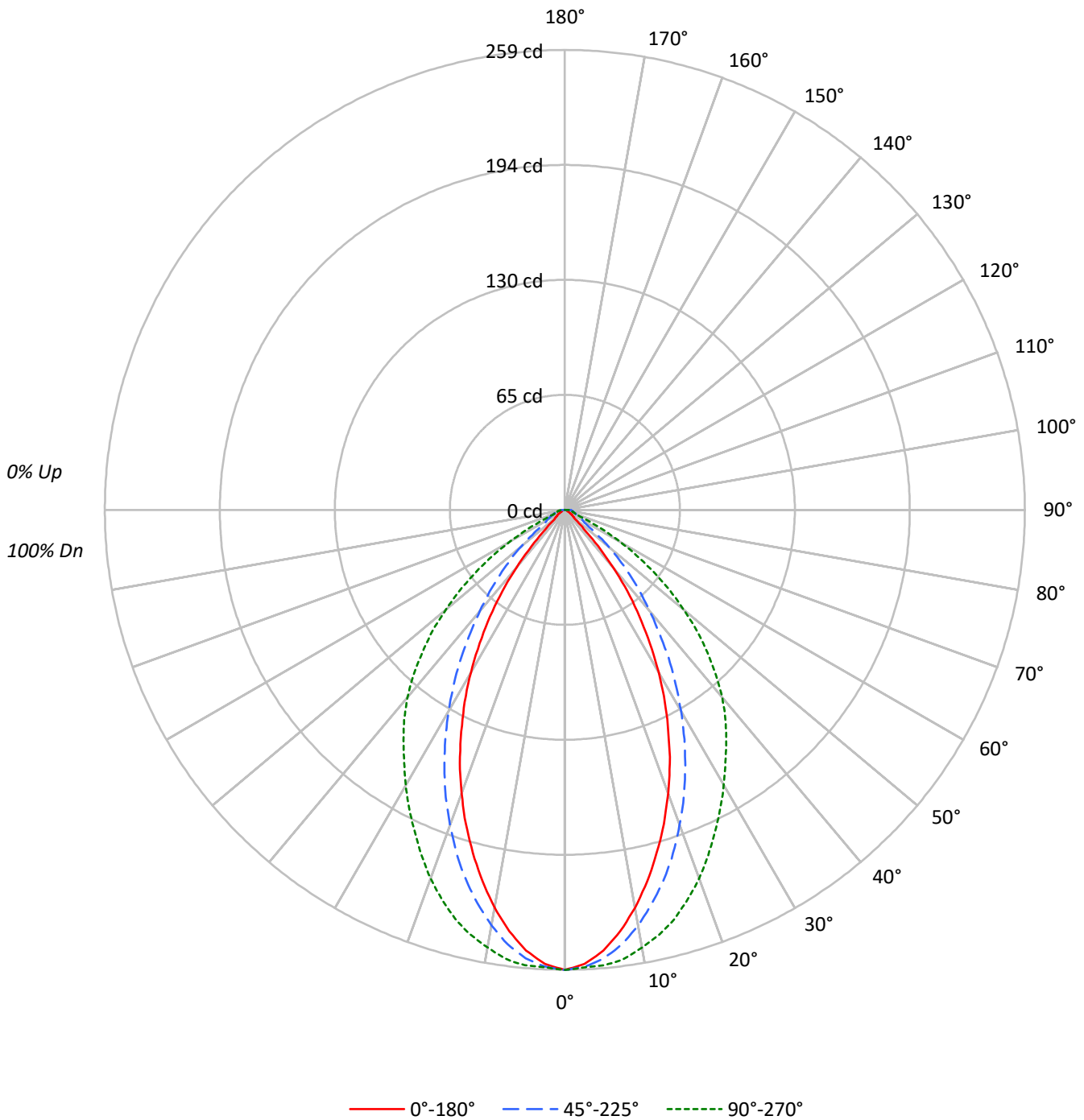
Lumens per Lamp: N/A
Luminaire Lumens: 311.2 lumens
Efficiency: N/A
Efficacy: 26.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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: P1059644

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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	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°	3042	3042	3042
5°	2937	2988	3035
10°	2711	2834	2984
15°	2431	2620	2899
20°	2123	2361	2762
25°	1785	2078	2591
30°	1435	1772	2427
35°	1051	1459	2271
40°	650	1136	2112
45°	251	855	1881
50°	122	586	1591
55°	98	323	1249
60°	66	270	836
65°	56	242	375
70°	55	216	216
75°	73	231	218
80°	108	298	243
85°	162	485	323

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1881 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.8	7.6
10°-20°	60.8	19.5
20°-30°	75.5	24.3
30°-40°	67.6	21.7
40°-50°	44.4	14.3
50°-60°	22.3	7.2
60°-70°	8.8	2.8
70°-80°	4.9	1.6
80°-90°	3.1	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°	160.0	51.4
0°-40°	227.6	73.2
0°-60°	294.4	94.6
0°-90°	311.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	311.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	249	253	254	255	258	23
15°	200	206	216	230	238	56
25°	138	147	160	183	200	63
35°	73	83	102	133	158	45
45°	15	25	52	87	113	14
55°	5	6	16	43	61	4
65°	2	6	9	11	14	2
75°	2	5	5	5	5	2
85°	1	4	4	4	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	259.1	259.1	259.1	259.1	259.1
2.5°	255.9	259.5	257.5	257.5	257.9
5°	249.2	253.1	253.5	255.1	257.5
7.5°	239.3	244.4	246.8	251.5	255.1
10°	227.4	232.9	237.7	246.0	250.3
12.5°	214.3	219.8	227.0	238.5	245.2
15°	200.0	206.4	215.5	230.1	238.5
17.5°	185.4	191.7	202.8	219.4	230.1
20°	169.9	177.1	188.9	208.0	221.0
22.5°	154.5	162.4	175.1	195.7	210.7
25°	137.8	146.6	160.4	183.0	200.0
27.5°	122.0	131.1	145.8	170.3	189.7
30°	105.8	114.9	130.7	157.3	179.0
32.5°	89.1	99.4	116.1	145.0	168.3
35°	73.3	83.2	101.8	133.1	158.4
37.5°	57.8	67.7	87.1	121.6	148.5
40°	42.4	52.7	74.1	110.5	137.8
42.5°	27.7	38.4	62.6	99.4	126.0
45°	15.1	25.0	51.5	86.7	113.3
47.5°	8.3	13.5	41.6	74.9	101.0
50°	6.7	7.5	32.1	63.8	87.1
52.5°	5.5	6.3	23.0	53.1	74.5
55°	4.8	5.5	15.8	42.8	61.0
57.5°	4.0	4.8	12.7	32.9	47.9
60°	2.8	4.8	11.5	24.2	35.6
62.5°	2.4	4.8	9.9	16.6	23.8
65°	2.0	5.5	8.7	11.1	13.5
67.5°	1.6	5.5	7.5	7.1	7.1
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	4.8	4.8
77.5°	1.6	4.8	4.8	4.4	4.4
80°	1.6	4.4	4.4	4.0	3.6
82.5°	1.6	4.0	4.0	3.6	3.2
85°	1.2	3.6	3.6	3.6	2.4
87.5°	1.2	3.2	3.6	3.2	2.0
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	0.00	0.00	0.00	0.00	0.00	10.41	11.67	10.78	11.98	12.30
	3H	0.00	0.00	0.00	0.31	0.67	10.49	11.60	10.87	11.93	12.30
	4H	0.02	1.05	0.42	1.41	1.79	10.55	11.59	10.96	11.94	12.33
	6H	1.09	2.04	1.50	2.41	2.80	10.66	11.61	11.07	11.98	12.37
	8H	1.63	2.53	2.07	2.93	3.33	10.72	11.62	11.15	12.01	12.42
	12H	2.12	2.98	2.55	3.36	3.79	10.79	11.65	11.22	12.03	12.46
4H	2H	0.00	0.64	0.01	0.99	1.37	10.27	11.31	10.68	11.66	12.05
	3H	2.03	2.88	2.45	3.28	3.69	10.44	11.29	10.86	11.69	12.10
	4H	3.37	4.13	3.80	4.55	4.99	10.57	11.33	11.01	11.75	12.20
	6H	4.53	5.18	4.99	5.63	6.10	10.80	11.45	11.26	11.90	12.36
	8H	5.05	5.66	5.52	6.11	6.58	10.92	11.53	11.39	11.98	12.45
	12H	5.51	6.05	6.00	6.53	7.01	11.09	11.63	11.57	12.11	12.59
8H	4H	4.29	4.90	4.76	5.35	5.82	10.58	11.19	11.05	11.64	12.11
	6H	5.93	6.43	6.43	6.92	7.41	10.92	11.42	11.42	11.91	12.40
	8H	6.76	7.21	7.29	7.73	8.22	11.15	11.60	11.67	12.12	12.61
	12H	7.55	7.95	8.07	8.45	9.02	11.48	11.88	12.00	12.37	12.95
12H	4H	4.47	5.01	4.95	5.49	5.97	10.57	11.11	11.05	11.59	12.07
	6H	6.25	6.70	6.77	7.21	7.71	10.95	11.40	11.47	11.92	12.41
	8H	7.27	7.67	7.78	8.16	8.73	11.26	11.66	11.78	12.16	12.73