

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: P1060805

Luminaire Tested: S124RDR-H350D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060805
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D840-X4F0-XX-UDD-BVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

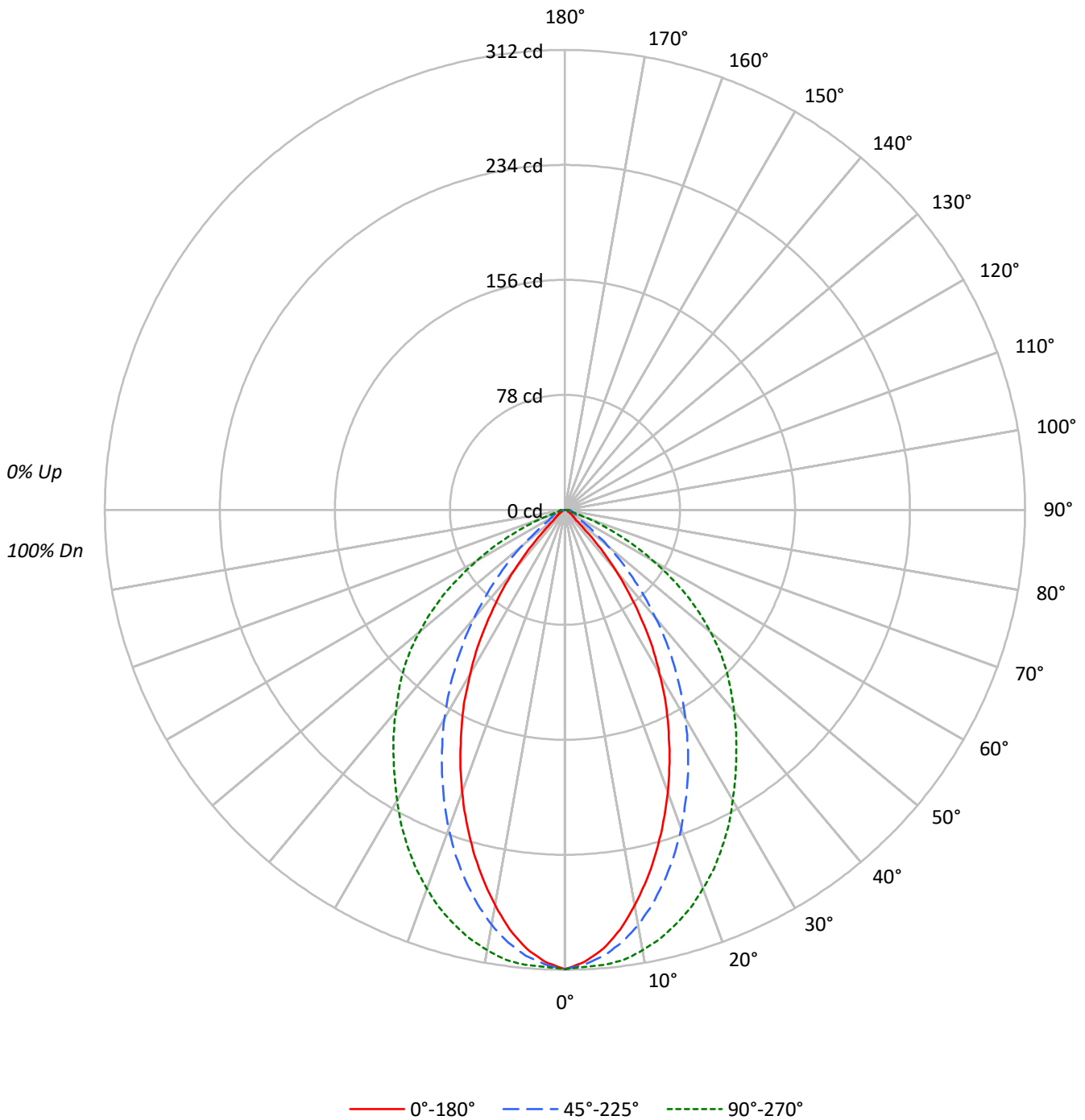
Lumens per Lamp: N/A
Luminaire Lumens: 391.1 lumens
Efficiency: N/A
Efficacy: 33.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	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	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2683	2683	2683
5°	2583	2625	2679
10°	2382	2501	2652
15°	2138	2321	2593
20°	1868	2110	2507
25°	1580	1875	2396
30°	1276	1625	2261
35°	950	1358	2130
40°	603	1076	2004
45°	241	789	1890
50°	104	504	1725
55°	81	260	1506
60°	57	177	1194
65°	43	177	815
70°	43	156	375
75°	57	166	150
80°	84	183	164
85°	168	326	247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1890 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.5	7.3
10°-20°	73.6	18.8
20°-30°	92.9	23.8
30°-40°	85.3	21.8
40°-50°	58.2	14.9
50°-60°	31.6	8.1
60°-70°	13.4	3.4
70°-80°	4.6	1.2
80°-90°	2.9	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°	195.0	49.9
0°-40°	280.3	71.7
0°-60°	370.1	94.6
0°-90°	391.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	391.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	312	312	312	312	312	
5°	299	303	304	306	310	28
15°	240	248	260	279	291	67
25°	166	177	197	228	252	76
35°	90	102	129	170	203	56
45°	20	32	65	115	155	18
55°	5	6	17	63	100	5
65°	2	2	9	20	40	2
75°	2	4	5	4	4	2
85°	2	3	3	3	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	311.6	311.6	311.6	311.6	311.6
2.5°	307.0	310.8	308.7	309.5	310.3
5°	298.8	303.3	303.7	306.2	309.9
7.5°	287.2	292.6	295.9	302.1	307.9
10°	272.4	279.0	286.0	295.9	303.3
12.5°	256.7	263.7	274.0	288.1	298.0
15°	239.8	247.6	260.4	279.0	290.9
17.5°	222.0	230.7	246.0	267.8	283.1
20°	203.9	213.4	230.3	255.0	273.6
22.5°	185.3	195.2	213.8	241.8	263.7
25°	166.3	177.0	197.3	227.8	252.2
27.5°	148.2	158.1	180.3	213.8	240.6
30°	128.3	139.5	163.4	199.3	227.4
32.5°	110.2	120.9	146.1	184.5	215.0
35°	90.4	102.3	129.2	169.6	202.6
37.5°	71.8	83.4	112.7	155.6	190.7
40°	53.6	65.6	95.7	141.6	178.3
42.5°	35.9	48.7	79.6	127.1	166.7
45°	19.8	31.8	64.8	114.7	155.2
47.5°	10.3	17.3	50.8	102.3	142.8
50°	7.8	9.5	37.6	88.7	128.8
52.5°	6.6	7.0	25.6	75.1	114.7
55°	5.4	5.8	17.3	63.1	100.3
57.5°	4.1	4.5	12.4	51.6	84.2
60°	3.3	3.7	10.3	39.6	69.3
62.5°	2.5	2.9	9.9	29.3	54.5
65°	2.1	2.5	8.7	19.8	40.0
67.5°	1.7	2.5	7.4	12.8	26.8
70°	1.7	3.3	6.2	8.3	14.9
72.5°	1.7	3.7	5.4	5.4	5.4
75°	1.7	4.5	5.0	4.5	4.5
77.5°	1.7	4.1	4.1	4.1	4.1
80°	1.7	3.7	3.7	3.7	3.3
82.5°	1.7	3.3	3.7	3.7	2.9
85°	1.7	3.3	3.3	3.3	2.5
87.5°	1.2	3.3	3.3	3.3	1.7
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	11.87	13.15	12.24	13.46	13.78
	3H	0.00	0.00	0.00	0.00	0.00	12.23	13.36	12.61	13.69	14.05
	4H	0.00	0.00	0.00	0.00	0.00	12.19	13.24	12.60	13.59	13.98
	6H	0.00	0.00	0.00	0.00	0.00	12.17	13.13	12.58	13.50	13.90
	8H	0.00	0.00	0.00	0.18	0.59	12.16	13.07	12.59	13.46	13.87
	12H	0.00	0.57	0.13	0.96	1.39	12.16	13.03	12.59	13.41	13.84
4H	2H	0.00	0.00	0.00	0.00	0.00	11.68	12.72	12.08	13.08	13.46
	3H	0.00	0.00	0.00	0.26	0.66	12.07	12.93	12.48	13.33	13.73
	4H	0.44	1.20	0.88	1.62	2.07	12.05	12.81	12.49	13.23	13.68
	6H	1.70	2.35	2.16	2.80	3.27	12.07	12.73	12.53	13.17	13.64
	8H	2.28	2.89	2.75	3.34	3.81	12.08	12.69	12.55	13.14	13.61
	12H	2.97	3.51	3.46	4.00	4.47	12.12	12.66	12.60	13.14	13.62
8H	4H	1.51	2.13	1.99	2.58	3.05	11.95	12.57	12.42	13.01	13.49
	6H	3.13	3.63	3.63	4.13	4.61	12.00	12.50	12.50	13.00	13.48
	8H	3.97	4.42	4.49	4.94	5.43	12.06	12.51	12.58	13.02	13.52
	12H	4.95	5.35	5.46	5.84	6.42	12.17	12.57	12.69	13.07	13.64
12H	4H	1.70	2.24	2.19	2.73	3.20	11.91	12.45	12.40	12.94	13.41
	6H	3.47	3.92	3.99	4.44	4.93	11.97	12.42	12.49	12.94	13.43
	8H	4.50	4.90	5.01	5.39	5.97	12.07	12.47	12.59	12.97	13.54