

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: P1060814

Luminaire Tested: S124RDR-H350D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060814
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-H350D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

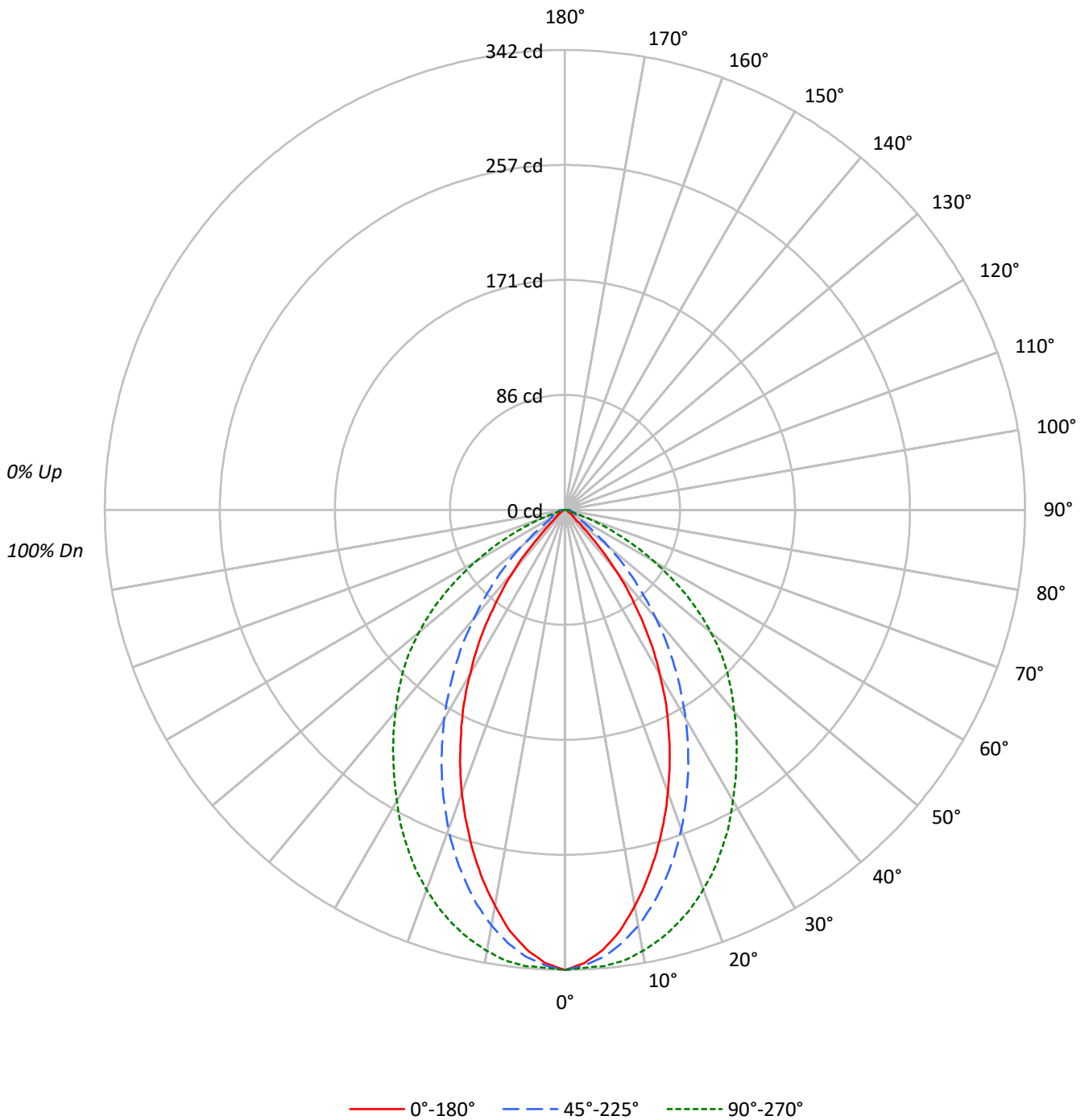
Lumens per Lamp: N/A
Luminaire Lumens: 429.4 lumens
Efficiency: N/A
Efficacy: 36.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	103	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	88	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°	2947	2947	2947
5°	2836	2884	2942
10°	2615	2746	2913
15°	2347	2550	2848
20°	2052	2318	2754
25°	1735	2058	2631
30°	1401	1785	2483
35°	1044	1492	2339
40°	662	1181	2201
45°	265	867	2075
50°	115	552	1894
55°	89	285	1653
60°	62	195	1311
65°	47	194	897
70°	45	171	410
75°	60	180	166
80°	89	203	179
85°	178	356	267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2075 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.3	7.3
10°-20°	80.8	18.8
20°-30°	102.0	23.8
30°-40°	93.7	21.8
40°-50°	63.9	14.9
50°-60°	34.6	8.1
60°-70°	14.7	3.4
70°-80°	5.1	1.2
80°-90°	3.2	0.7
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°	214.1	49.9
0°-40°	307.9	71.7
0°-60°	406.4	94.6
0°-90°	429.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	429.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	342	342	342	342	342	
5°	328	333	334	336	340	30
15°	263	272	286	306	320	73
25°	183	194	217	250	277	83
35°	99	112	142	186	222	62
45°	22	35	71	126	170	20
55°	6	6	19	69	110	5
65°	2	3	10	22	44	2
75°	2	5	5	5	5	2
85°	2	4	4	4	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	342.2	342.2	342.2	342.2	342.2
2.5°	337.2	341.3	339.0	339.9	340.8
5°	328.1	333.1	333.6	336.3	340.4
7.5°	315.4	321.3	324.9	331.7	338.1
10°	299.1	306.4	314.1	324.9	333.1
12.5°	281.9	289.6	300.9	316.3	327.2
15°	263.3	271.9	286.0	306.4	319.5
17.5°	243.8	253.3	270.1	294.1	310.9
20°	223.9	234.3	252.9	280.1	300.5
22.5°	203.5	214.4	234.8	265.6	289.6
25°	182.6	194.4	216.6	250.2	276.9
27.5°	162.7	173.6	198.0	234.8	264.2
30°	140.9	153.2	179.5	218.9	249.7
32.5°	121.0	132.8	160.4	202.6	236.1
35°	99.3	112.4	141.9	186.3	222.5
37.5°	78.9	91.5	123.7	170.9	209.4
40°	58.9	72.1	105.1	155.4	195.8
42.5°	39.4	53.5	87.5	139.6	183.1
45°	21.8	34.9	71.2	126.0	170.4
47.5°	11.3	19.0	55.7	112.4	156.8
50°	8.6	10.4	41.2	97.4	141.4
52.5°	7.3	7.7	28.1	82.5	126.0
55°	5.9	6.3	19.0	69.3	110.1
57.5°	4.5	5.0	13.6	56.6	92.5
60°	3.6	4.1	11.3	43.5	76.1
62.5°	2.7	3.2	10.9	32.2	59.8
65°	2.3	2.7	9.5	21.8	44.0
67.5°	1.8	2.7	8.2	14.0	29.5
70°	1.8	3.6	6.8	9.1	16.3
72.5°	1.8	4.1	5.9	5.9	5.9
75°	1.8	5.0	5.4	5.0	5.0
77.5°	1.8	4.5	4.5	4.5	4.5
80°	1.8	4.1	4.1	4.1	3.6
82.5°	1.8	3.6	4.1	4.1	3.2
85°	1.8	3.6	3.6	3.6	2.7
87.5°	1.4	3.6	3.6	3.6	1.8
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	12.19	13.47	12.56	13.78	14.10
	3H	0.00	0.00	0.00	0.00	0.00	12.55	13.68	12.93	14.01	14.37
	4H	0.00	0.00	0.00	0.00	0.00	12.52	13.57	12.92	13.92	14.30
	6H	0.00	0.00	0.00	0.00	0.17	12.49	13.45	12.91	13.82	14.22
	8H	0.00	0.03	0.00	0.42	0.83	12.48	13.39	12.91	13.78	14.19
	12H	0.00	0.79	0.35	1.17	1.60	12.48	13.35	12.91	13.73	14.16
4H	2H	0.00	0.00	0.00	0.00	0.00	12.00	13.05	12.40	13.40	13.78
	3H	0.00	0.16	0.00	0.57	0.97	12.39	13.25	12.80	13.65	14.06
	4H	0.76	1.53	1.20	1.95	2.39	12.37	13.14	12.81	13.56	14.00
	6H	2.00	2.66	2.47	3.11	3.58	12.39	13.05	12.85	13.50	13.96
	8H	2.57	3.18	3.04	3.63	4.10	12.40	13.02	12.87	13.46	13.93
	12H	3.24	3.78	3.72	4.26	4.74	12.44	12.98	12.92	13.46	13.94
8H	4H	1.83	2.45	2.30	2.89	3.37	12.27	12.89	12.74	13.33	13.81
	6H	3.45	3.95	3.95	4.45	4.93	12.32	12.82	12.83	13.32	13.80
	8H	4.27	4.73	4.80	5.24	5.73	12.38	12.83	12.90	13.35	13.84
	12H	5.23	5.63	5.75	6.13	6.70	12.50	12.90	13.01	13.39	13.96
12H	4H	2.02	2.57	2.51	3.05	3.52	12.23	12.78	12.72	13.26	13.73
	6H	3.80	4.25	4.32	4.76	5.26	12.29	12.74	12.81	13.26	13.75
	8H	4.81	5.21	5.33	5.70	6.28	12.40	12.80	12.91	13.29	13.86