

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: P1060247

Luminaire Tested: S124RDR-S1020D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060247  
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-S1020D850-X4F0-XX-UDD-BVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

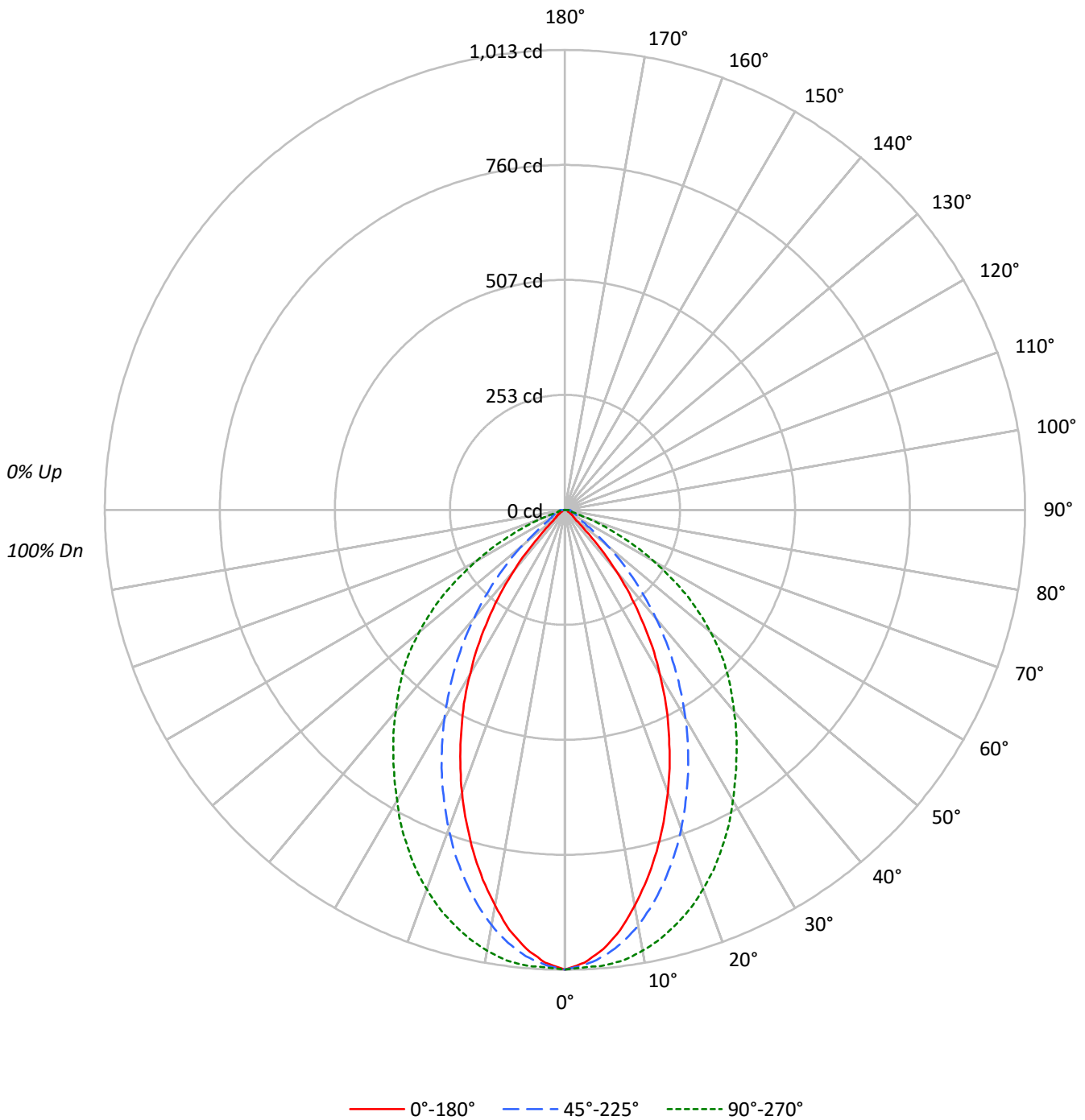
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1271.0 lumens  
Efficiency: N/A  
Efficacy: 36.3 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): 35  
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: P1060247

CATALOG NUMBER: S124RDR-S1020D850-X4F0-XX-UDD-BVL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1060247

CATALOG NUMBER: S124RDR-S1020D850-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	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	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°	8720	8720	8720
5°	8394	8533	8707
10°	7741	8128	8621
15°	6947	7546	8430
20°	6072	6859	8149
25°	5136	6092	7786
30°	4148	5282	7349
35°	3087	4413	6923
40°	1960	3498	6513
45°	784	2565	6141
50°	342	1636	5606
55°	261	845	4893
60°	184	577	3880
65°	137	575	2651
70°	136	506	1216
75°	180	536	492
80°	268	600	531
85°	534	1057	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6141 cd/sqm



TEST NUMBER: P1060247

CATALOG NUMBER: S124RDR-S1020D850-X4F0-XX-UDD-BVL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.7	7.3
10°-20°	239.1	18.8
20°-30°	302.0	23.8
30°-40°	277.4	21.8
40°-50°	189.1	14.9
50°-60°	102.6	8.1
60°-70°	43.5	3.4
70°-80°	15.1	1.2
80°-90°	9.5	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°	633.8	49.9
0°-40°	911.2	71.7
0°-60°	1202.9	94.6
0°-90°	1271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1013	1013	1013	1013	1013	
5°	971	986	987	995	1007	90
15°	779	805	846	907	946	217
25°	541	575	641	740	820	247
35°	294	333	420	551	659	182
45°	64	103	211	373	504	59
55°	17	19	56	205	326	16
65°	7	8	28	64	130	7
75°	5	15	16	15	15	6
85°	5	11	11	11	8	5
90°	0	0	0	0	0	



TEST NUMBER: P1060247

CATALOG NUMBER: S124RDR-S1020D850-X4F0-XX-UDD-BVL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1012.7	1012.7	1012.7	1012.7	1012.7
2.5°	997.9	1010.0	1003.3	1006.0	1008.7
5°	971.1	985.9	987.2	995.3	1007.3
7.5°	933.6	951.0	961.7	981.8	1000.6
10°	885.3	906.7	929.5	961.7	985.9
12.5°	834.3	857.1	890.6	936.2	968.4
15°	779.3	804.8	846.4	906.7	945.6
17.5°	721.6	749.8	799.4	870.5	920.1
20°	662.6	693.5	748.5	828.9	889.3
22.5°	602.3	634.4	694.8	786.0	857.1
25°	540.6	575.4	641.2	740.4	819.5
27.5°	481.5	513.7	586.2	694.8	782.0
30°	417.2	453.4	531.2	647.9	739.1
32.5°	358.1	393.0	474.8	599.6	698.8
35°	293.7	332.6	419.8	551.3	658.6
37.5°	233.4	270.9	366.2	505.7	619.7
40°	174.4	213.3	311.2	460.1	579.4
42.5°	116.7	158.3	258.9	413.1	541.9
45°	64.4	103.3	210.6	372.9	504.3
47.5°	33.5	56.3	165.0	332.6	464.1
50°	25.5	30.9	122.1	288.4	418.5
52.5°	21.5	22.8	83.2	244.1	372.9
55°	17.4	18.8	56.3	205.2	325.9
57.5°	13.4	14.8	40.2	167.7	273.6
60°	10.7	12.1	33.5	128.8	225.3
62.5°	8.0	9.4	32.2	95.2	177.1
65°	6.7	8.0	28.2	64.4	130.1
67.5°	5.4	8.0	24.1	41.6	87.2
70°	5.4	10.7	20.1	26.8	48.3
72.5°	5.4	12.1	17.4	17.4	17.4
75°	5.4	14.8	16.1	14.8	14.8
77.5°	5.4	13.4	13.4	13.4	13.4
80°	5.4	12.1	12.1	12.1	10.7
82.5°	5.4	10.7	12.1	12.1	9.4
85°	5.4	10.7	10.7	10.7	8.0
87.5°	4.0	10.7	10.7	10.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)