

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: P1060724

Luminaire Tested: S124RDR-H1195D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060724  
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-H1195D840-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: -

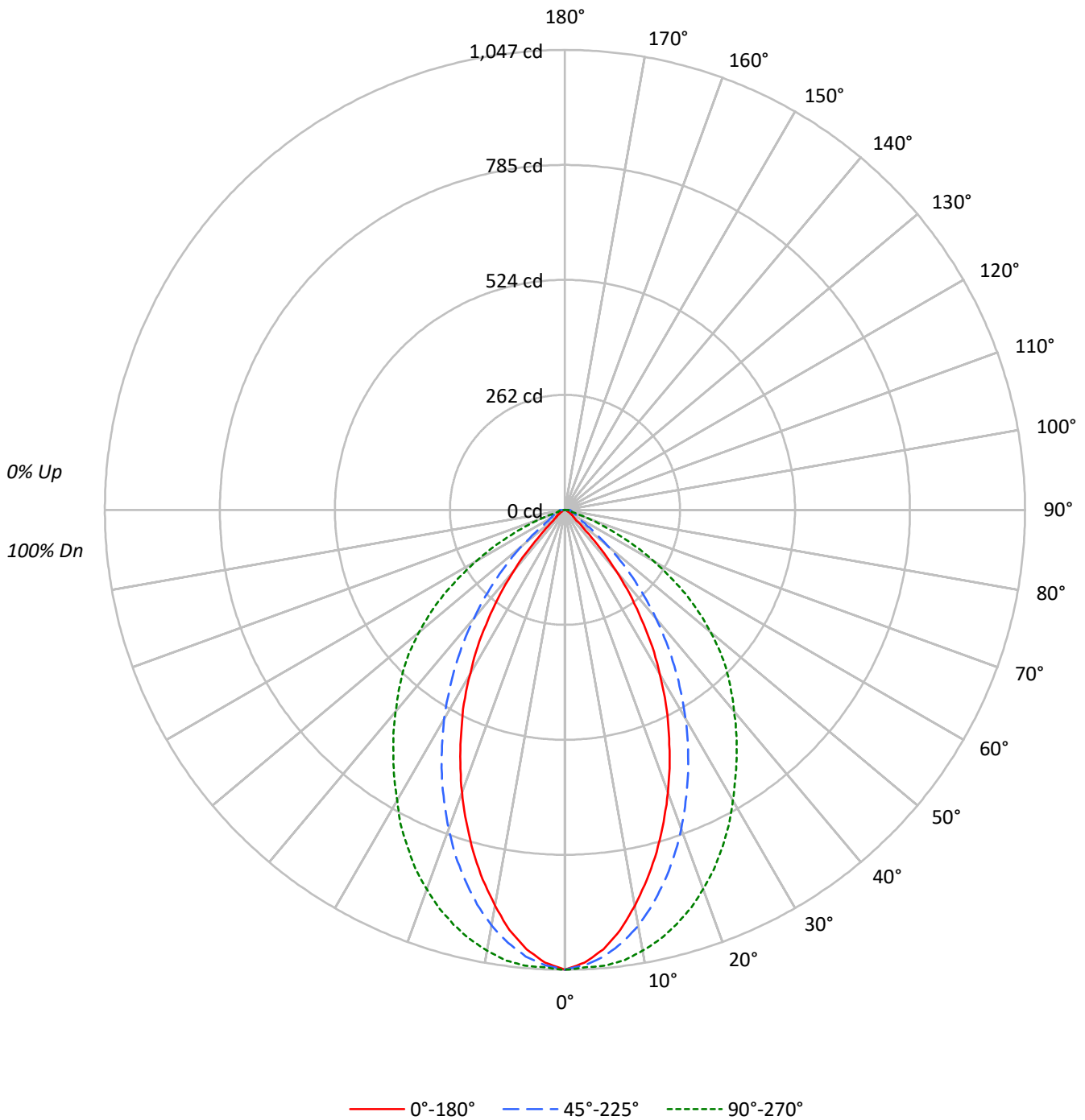
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1313.9 lumens  
Efficiency: N/A  
Efficacy: 36.0 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): 36.5  
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	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°	9015	9015	9015
5°	8678	8822	9002
10°	8002	8402	8912
15°	7182	7801	8715
20°	6277	7090	8424
25°	5309	6297	8050
30°	4288	5460	7597
35°	3193	4562	7157
40°	2027	3616	6733
45°	811	2651	6350
50°	352	1691	5795
55°	270	874	5059
60°	191	598	4013
65°	141	593	2741
70°	138	524	1256
75°	183	552	509
80°	273	620	550
85°	543	1097	820

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6350 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.8	7.3
10°-20°	247.2	18.8
20°-30°	312.2	23.8
30°-40°	286.8	21.8
40°-50°	195.5	14.9
50°-60°	106.0	8.1
60°-70°	45.0	3.4
70°-80°	15.6	1.2
80°-90°	9.9	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°	655.2	49.9
0°-40°	942.0	71.7
0°-60°	1243.5	94.6
0°-90°	1313.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1313.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1047	1047	1047	1047	1047	
5°	1004	1019	1021	1029	1041	93
15°	806	832	875	937	978	224
25°	559	595	663	765	847	255
35°	304	344	434	570	681	189
45°	67	107	218	386	521	61
55°	18	19	58	212	337	16
65°	7	8	29	67	134	7
75°	6	15	17	15	15	6
85°	6	11	11	11	8	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1046.9	1046.9	1046.9	1046.9	1046.9
2.5°	1031.6	1044.1	1037.2	1040.0	1042.7
5°	1003.9	1019.2	1020.6	1028.9	1041.4
7.5°	965.1	983.1	994.2	1015.0	1034.4
10°	915.2	937.4	960.9	994.2	1019.2
12.5°	862.5	886.1	920.7	967.9	1001.1
15°	805.6	832.0	875.0	937.4	977.6
17.5°	746.0	775.1	826.4	899.9	951.2
20°	685.0	716.9	773.7	856.9	919.3
22.5°	622.6	655.9	718.3	812.6	886.1
25°	558.8	594.9	662.8	765.4	847.2
27.5°	497.8	531.1	606.0	718.3	808.4
30°	431.2	468.7	549.1	669.7	764.0
32.5°	370.2	406.3	490.9	619.8	722.4
35°	303.7	343.9	434.0	569.9	680.8
37.5°	241.3	280.1	378.5	522.8	640.6
40°	180.3	220.5	321.7	475.6	599.0
42.5°	120.6	163.6	267.6	427.1	560.2
45°	66.6	106.8	217.7	385.5	521.4
47.5°	34.7	58.2	170.6	343.9	479.8
50°	26.3	31.9	126.2	298.1	432.6
52.5°	22.2	23.6	86.0	252.4	385.5
55°	18.0	19.4	58.2	212.2	337.0
57.5°	13.9	15.3	41.6	173.3	282.9
60°	11.1	12.5	34.7	133.1	233.0
62.5°	8.3	9.7	33.3	98.5	183.0
65°	6.9	8.3	29.1	66.6	134.5
67.5°	5.5	8.3	25.0	43.0	90.1
70°	5.5	11.1	20.8	27.7	49.9
72.5°	5.5	12.5	18.0	18.0	18.0
75°	5.5	15.3	16.6	15.3	15.3
77.5°	5.5	13.9	13.9	13.9	13.9
80°	5.5	12.5	12.5	12.5	11.1
82.5°	5.5	11.1	12.5	12.5	9.7
85°	5.5	11.1	11.1	11.1	8.3
87.5°	4.2	11.1	11.1	11.1	5.5
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	0.27	16.08	17.36	16.45	17.67	17.98
	3H	0.00	0.73	0.00	1.06	1.43	16.44	17.56	16.82	17.89	18.26
	4H	0.98	2.03	1.38	2.38	2.76	16.40	17.45	16.81	17.80	18.19
	6H	2.34	3.30	2.75	3.67	4.07	16.38	17.34	16.79	17.71	18.11
	8H	3.01	3.92	3.44	4.32	4.72	16.37	17.28	16.80	17.67	18.08
	12H	3.81	4.68	4.24	5.06	5.49	16.37	17.24	16.80	17.62	18.05
4H	2H	1.78	2.83	2.19	3.18	3.57	15.88	16.93	16.29	17.28	17.67
	3H	3.20	4.06	3.62	4.46	4.87	16.28	17.13	16.69	17.54	17.94
	4H	4.66	5.42	5.09	5.84	6.28	16.26	17.02	16.69	17.44	17.89
	6H	5.90	6.56	6.36	7.00	7.47	16.28	16.94	16.74	17.38	17.85
	8H	6.46	7.08	6.93	7.53	8.00	16.29	16.90	16.76	17.35	17.82
	12H	7.13	7.68	7.62	8.16	8.63	16.32	16.87	16.81	17.35	17.83
8H	4H	5.73	6.34	6.20	6.79	7.26	16.16	16.77	16.63	17.22	17.69
	6H	7.34	7.84	7.84	8.34	8.82	16.21	16.71	16.71	17.21	17.69
	8H	8.17	8.62	8.70	9.14	9.63	16.27	16.72	16.79	17.24	17.73
	12H	9.13	9.53	9.65	10.03	10.60	16.38	16.78	16.90	17.28	17.85
12H	4H	5.92	6.46	6.41	6.95	7.42	16.12	16.66	16.61	17.15	17.62
	6H	7.69	8.14	8.21	8.66	9.15	16.18	16.63	16.70	17.15	17.64
	8H	8.71	9.11	9.22	9.60	10.17	16.28	16.68	16.80	17.18	17.75