

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: P1060967

Luminaire Tested: S124RDR-H795D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060967  
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-H795D840-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: -

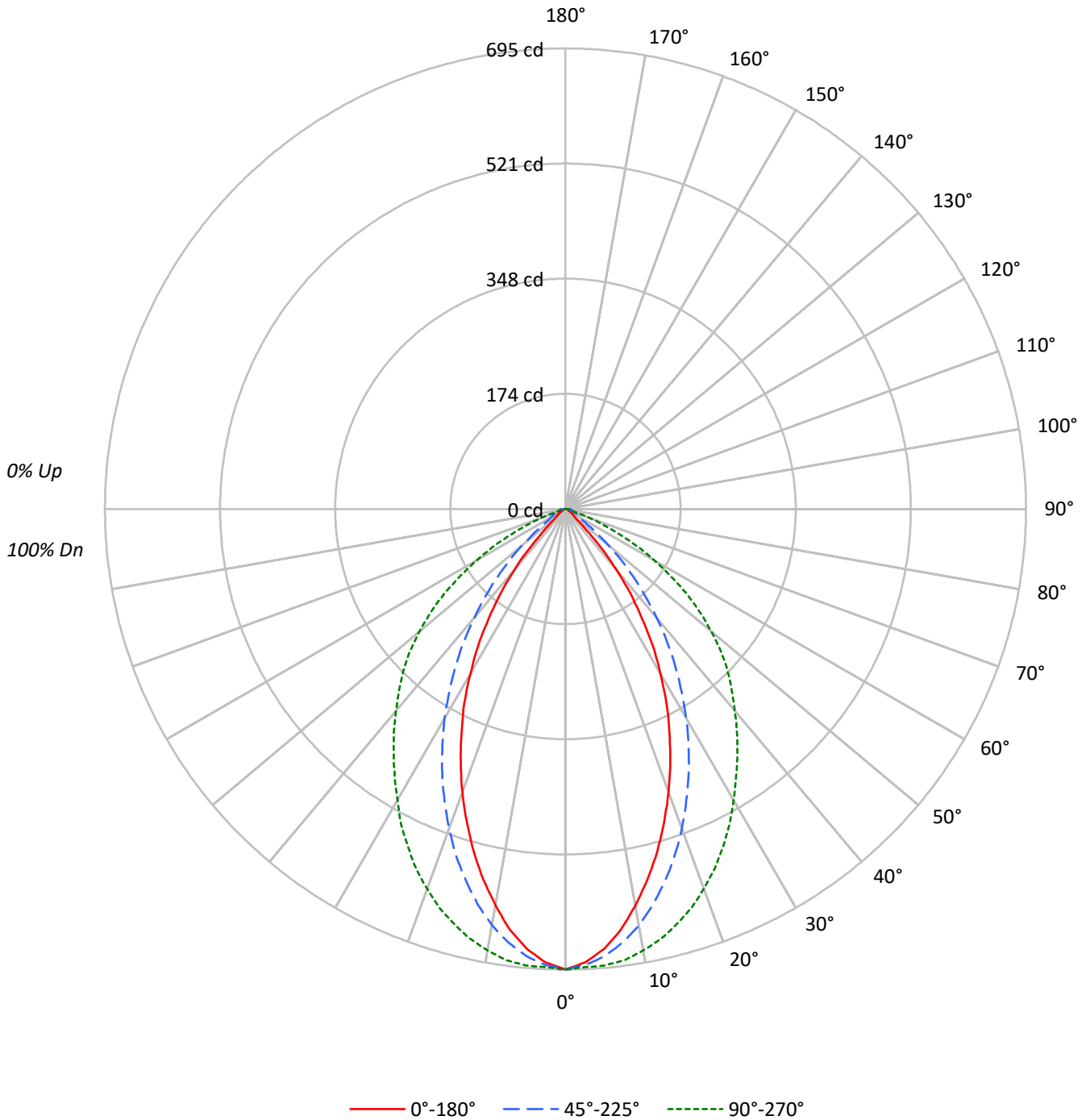
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 872.2 lumens  
Efficiency: N/A  
Efficacy: 37.1 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): 23.5  
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				100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54				54
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50				50
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46				46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39				39

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5984	5984	5984
5°	5760	5855	5975
10°	5312	5577	5915
15°	4768	5178	5785
20°	4167	4707	5592
25°	3524	4181	5344
30°	2846	3624	5042
35°	2119	3029	4750
40°	1346	2400	4469
45°	538	1760	4215
50°	234	1123	3847
55°	180	581	3358
60°	127	396	2663
65°	94	393	1820
70°	93	347	833
75°	123	366	336
80°	183	412	367
85°	366	731	543

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4215 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.6	7.3
10°-20°	164.1	18.8
20°-30°	207.2	23.8
30°-40°	190.3	21.8
40°-50°	129.8	14.9
50°-60°	70.4	8.1
60°-70°	29.9	3.4
70°-80°	10.3	1.2
80°-90°	6.6	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°	434.9	49.9
0°-40°	625.2	71.7
0°-60°	825.4	94.6
0°-90°	872.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	872.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	666	676	677	683	691	62
15°	535	552	581	622	649	149
25°	371	395	440	508	562	170
35°	202	228	288	378	452	125
45°	44	71	144	256	346	41
55°	12	13	39	141	224	11
65°	5	6	19	44	89	5
75°	4	10	11	10	10	4
85°	4	7	7	7	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	694.9	694.9	694.9	694.9	694.9
2.5°	684.8	693.1	688.5	690.3	692.1
5°	666.4	676.5	677.4	682.9	691.2
7.5°	640.6	652.6	659.9	673.7	686.6
10°	607.5	622.2	637.8	659.9	676.5
12.5°	572.5	588.1	611.2	642.4	664.5
15°	534.8	552.2	580.8	622.2	648.9
17.5°	495.2	514.5	548.6	597.3	631.4
20°	454.7	475.9	513.6	568.8	610.2
22.5°	413.3	435.4	476.8	539.4	588.1
25°	370.9	394.9	440.0	508.1	562.4
27.5°	330.4	352.5	402.2	476.8	536.6
30°	286.2	311.1	364.5	444.6	507.1
32.5°	245.7	269.7	325.8	411.4	479.5
35°	201.6	228.3	288.1	378.3	451.9
37.5°	160.2	185.9	251.3	347.0	425.2
40°	119.7	146.3	213.5	315.7	397.6
42.5°	80.1	108.6	177.6	283.5	371.8
45°	44.2	70.9	144.5	255.9	346.1
47.5°	23.0	38.7	113.2	228.3	318.5
50°	17.5	21.2	83.8	197.9	287.2
52.5°	14.7	15.6	57.1	167.5	255.9
55°	12.0	12.9	38.7	140.8	223.7
57.5°	9.2	10.1	27.6	115.1	187.8
60°	7.4	8.3	23.0	88.4	154.6
62.5°	5.5	6.4	22.1	65.3	121.5
65°	4.6	5.5	19.3	44.2	89.3
67.5°	3.7	5.5	16.6	28.5	59.8
70°	3.7	7.4	13.8	18.4	33.1
72.5°	3.7	8.3	12.0	12.0	12.0
75°	3.7	10.1	11.0	10.1	10.1
77.5°	3.7	9.2	9.2	9.2	9.2
80°	3.7	8.3	8.3	8.3	7.4
82.5°	3.7	7.4	8.3	8.3	6.4
85°	3.7	7.4	7.4	7.4	5.5
87.5°	2.8	7.4	7.4	7.4	3.7
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	14.66	15.94	15.03	16.25	16.56
	3H	0.00	0.00	0.00	0.00	0.00	15.01	16.14	15.40	16.47	16.84
	4H	0.00	0.61	0.00	0.96	1.34	14.98	16.03	15.38	16.38	16.77
	6H	0.93	1.89	1.35	2.27	2.66	14.96	15.92	15.37	16.29	16.68
	8H	1.62	2.53	2.05	2.92	3.32	14.95	15.86	15.38	16.25	16.65
	12H	2.42	3.29	2.86	3.68	4.11	14.94	15.81	15.38	16.20	16.63
4H	2H	0.35	1.40	0.75	1.75	2.13	14.46	15.51	14.87	15.86	16.25
	3H	1.78	2.63	2.19	3.04	3.44	14.86	15.71	15.27	16.12	16.52
	4H	3.22	3.99	3.66	4.41	4.85	14.84	15.60	15.27	16.02	16.46
	6H	4.48	5.13	4.94	5.58	6.05	14.86	15.51	15.32	15.96	16.43
	8H	5.05	5.66	5.52	6.11	6.58	14.86	15.48	15.34	15.93	16.40
	12H	5.73	6.27	6.22	6.76	7.23	14.90	15.44	15.39	15.93	16.40
8H	4H	4.30	4.91	4.77	5.36	5.83	14.74	15.35	15.21	15.80	16.27
	6H	5.92	6.42	6.42	6.92	7.40	14.79	15.29	15.29	15.79	16.27
	8H	6.76	7.21	7.28	7.72	8.22	14.84	15.30	15.37	15.81	16.31
	12H	7.73	8.13	8.24	8.62	9.20	14.96	15.36	15.48	15.86	16.43
12H	4H	4.49	5.03	4.98	5.51	5.99	14.70	15.24	15.19	15.73	16.20
	6H	6.26	6.72	6.79	7.23	7.73	14.76	15.21	15.28	15.72	16.22
	8H	7.29	7.69	7.81	8.19	8.76	14.86	15.26	15.38	15.76	16.33