

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: P1060973

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060973  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H795D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

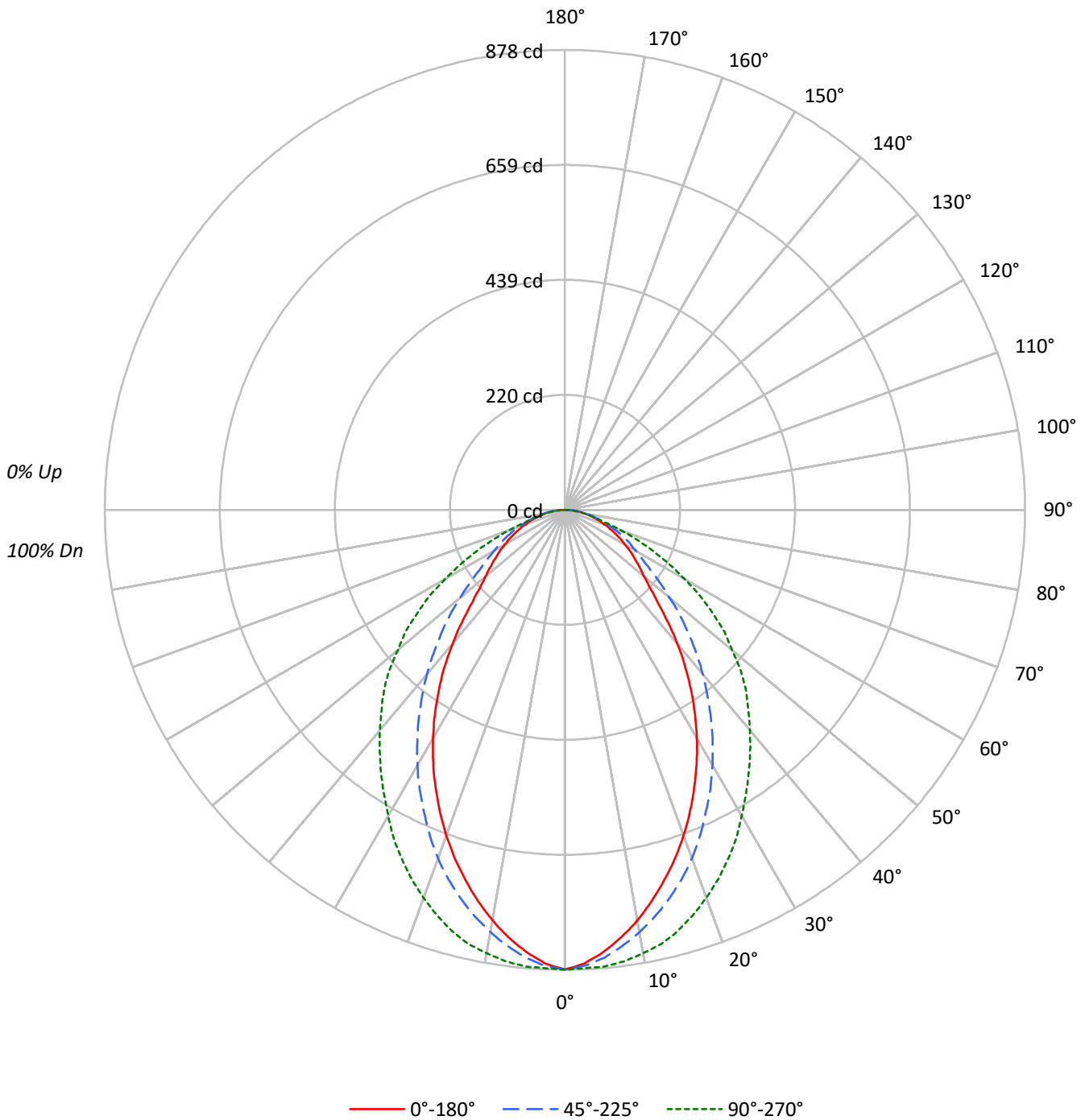
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1597.7 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87			87	
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75			75	
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65			65	
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57			57	
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50			50	
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45			45	
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41			41	
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37			37	
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34			34	
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31			31	

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

	0°	45°	90°
0°	7557	7557	7557
5°	7323	7419	7562
10°	6958	7159	7513
15°	6528	6848	7422
20°	6061	6491	7225
25°	5550	6049	6992
30°	5003	5598	6705
35°	4410	5106	6430
40°	3753	4602	6174
45°	3047	4066	5949
50°	2638	3501	5570
55°	2444	2970	5164
60°	2282	2678	4531
65°	2137	2512	3767
70°	1992	2316	2848
75°	1896	2143	2049
80°	1780	1964	1736
85°	1640	1818	1363

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5949 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.0	5.1
10°-20°	217.8	13.6
20°-30°	297.4	18.6
30°-40°	311.6	19.5
40°-50°	269.7	16.9
50°-60°	202.6	12.7
60°-70°	130.7	8.2
70°-80°	67.0	4.2
80°-90°	20.0	1.3
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°	596.2	37.3
0°-40°	907.8	56.8
0°-60°	1380.1	86.4
0°-90°	1597.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1597.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	878	878	878	878	878	
5°	847	860	858	865	875	79
15°	732	751	768	803	832	205
25°	584	606	637	686	736	268
35°	420	443	486	550	612	261
45°	250	276	334	416	488	197
55°	163	168	198	282	344	146
65°	105	107	123	149	185	104
75°	57	64	64	64	62	60
85°	17	19	18	18	14	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	877.6	877.6	877.6	877.6	877.6
2.5°	866.6	877.6	871.2	873.0	875.8
5°	847.2	860.1	858.3	864.7	874.8
7.5°	823.3	837.1	839.9	854.6	869.3
10°	795.7	811.4	818.7	840.8	859.2
12.5°	765.4	781.9	794.8	822.4	849.1
15°	732.3	750.6	768.1	803.1	832.5
17.5°	698.2	716.6	739.6	778.2	811.4
20°	661.4	681.7	708.3	748.8	788.4
22.5°	623.7	644.9	673.4	717.5	763.5
25°	584.1	606.2	636.6	686.3	735.9
27.5°	544.6	566.7	600.7	653.1	707.4
30°	503.2	526.2	563.0	620.0	674.3
32.5°	461.8	486.6	524.4	585.1	643.0
35°	419.5	443.4	485.7	550.1	611.7
37.5°	377.2	402.0	447.1	516.1	580.5
40°	333.9	359.7	409.4	482.0	549.2
42.5°	290.7	318.3	370.7	447.1	517.9
45°	250.2	276.0	333.9	415.8	488.5
47.5°	219.9	237.3	297.1	385.4	455.4
50°	196.9	206.1	261.3	352.3	415.8
52.5°	179.4	185.8	228.1	316.5	383.6
55°	162.8	168.3	197.8	282.4	344.0
57.5°	148.1	150.9	174.8	249.3	306.3
60°	132.5	135.2	155.5	213.4	263.1
62.5°	118.7	120.5	139.8	179.4	223.5
65°	104.9	106.7	123.3	149.0	184.9
67.5°	92.0	94.8	107.6	121.4	147.2
70°	79.1	84.6	92.0	98.4	113.1
72.5°	68.1	73.6	77.3	79.1	80.0
75°	57.0	63.5	64.4	63.5	61.6
77.5°	46.0	51.5	51.5	49.7	47.8
80°	35.9	40.5	39.6	37.7	35.0
82.5°	26.7	29.4	28.5	26.7	23.9
85°	16.6	19.3	18.4	17.5	13.8
87.5°	8.3	11.0	10.1	9.2	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	13.46	14.94	13.83	15.26	15.57	17.23	18.72	17.60	19.03	19.34
	3H	15.12	16.44	15.49	16.77	17.13	18.35	19.68	18.72	20.00	20.37
	4H	15.79	17.03	16.19	17.38	17.76	18.64	19.88	19.04	20.23	20.61
	6H	16.30	17.45	16.71	17.82	18.21	18.83	19.98	19.25	20.35	20.74
	8H	16.48	17.57	16.91	17.96	18.37	18.89	19.98	19.31	20.37	20.77
	12H	16.61	17.65	17.04	18.04	18.46	18.91	19.96	19.34	20.34	20.77
4H	2H	14.24	15.49	14.64	15.84	16.22	17.39	18.64	17.79	18.99	19.37
	3H	16.10	17.14	16.52	17.54	17.94	18.70	19.74	19.11	20.14	20.54
	4H	16.91	17.84	17.35	18.26	18.70	19.11	20.04	19.54	20.46	20.90
	6H	17.56	18.37	18.02	18.81	19.27	19.43	20.23	19.89	20.68	21.14
	8H	17.79	18.54	18.25	18.99	19.46	19.52	20.27	19.98	20.72	21.19
	12H	17.96	18.63	18.44	19.11	19.58	19.58	20.25	20.06	20.73	21.21
8H	4H	17.26	18.02	17.73	18.46	18.93	19.24	20.00	19.71	20.44	20.91
	6H	18.06	18.68	18.55	19.17	19.65	19.66	20.28	20.15	20.77	21.25
	8H	18.38	18.94	18.89	19.45	19.93	19.81	20.37	20.32	20.88	21.37
	12H	18.64	19.14	19.15	19.63	20.19	19.93	20.43	20.44	20.92	21.48
12H	4H	17.29	17.97	17.77	18.44	18.92	19.25	19.92	19.73	20.40	20.87
	6H	18.12	18.68	18.63	19.19	19.68	19.68	20.24	20.19	20.75	21.24
	8H	18.50	19.00	19.01	19.49	20.06	19.88	20.37	20.39	20.87	21.43