

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: P1060877

Luminaire Tested: S124RDR-H575D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060877  
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-H575D835-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: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

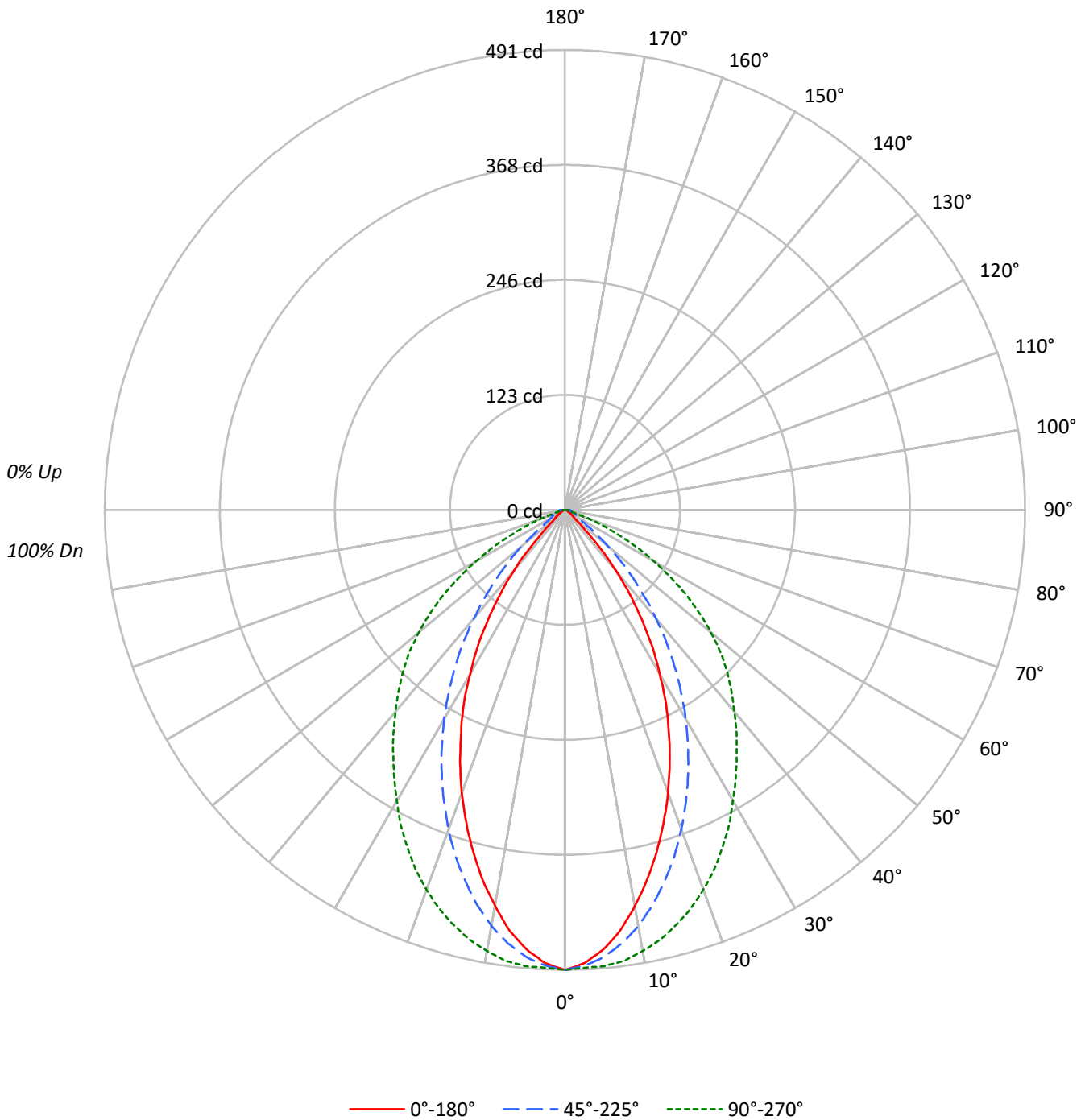
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 616.7 lumens  
Efficiency: N/A  
Efficacy: 35.4 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): 17.4  
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°	4231	4231	4231
5°	4073	4140	4224
10°	3756	3944	4182
15°	3371	3660	4090
20°	2946	3327	3954
25°	2492	2956	3778
30°	2013	2562	3566
35°	1498	2141	3359
40°	951	1697	3160
45°	380	1245	2980
50°	166	793	2719
55°	128	410	2374
60°	90	281	1882
65°	67	279	1286
70°	65	247	589
75°	87	260	240
80°	129	293	258
85°	257	514	385

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2980 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.0	7.3
10°-20°	116.0	18.8
20°-30°	146.5	23.8
30°-40°	134.6	21.8
40°-50°	91.8	14.9
50°-60°	49.8	8.1
60°-70°	21.1	3.4
70°-80°	7.3	1.2
80°-90°	4.6	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°	307.5	49.9
0°-40°	442.1	71.7
0°-60°	583.6	94.6
0°-90°	616.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	616.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	471	478	479	483	489	44
15°	378	390	411	440	459	105
25°	262	279	311	359	398	120
35°	142	161	204	268	320	89
45°	31	50	102	181	245	29
55°	8	9	27	100	158	8
65°	3	4	14	31	63	3
75°	3	7	8	7	7	3
85°	3	5	5	5	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	491.3	491.3	491.3	491.3	491.3
2.5°	484.2	490.0	486.8	488.1	489.4
5°	471.2	478.3	479.0	482.9	488.7
7.5°	452.9	461.4	466.6	476.4	485.5
10°	429.5	439.9	451.0	466.6	478.3
12.5°	404.8	415.9	432.1	454.2	469.9
15°	378.1	390.5	410.6	439.9	458.8
17.5°	350.1	363.8	387.9	422.4	446.4
20°	321.5	336.5	363.1	402.2	431.5
22.5°	292.2	307.8	337.1	381.4	415.9
25°	262.3	279.2	311.1	359.2	397.6
27.5°	233.6	249.3	284.4	337.1	379.4
30°	202.4	220.0	257.7	314.3	358.6
32.5°	173.8	190.7	230.4	290.9	339.1
35°	142.5	161.4	203.7	267.5	319.5
37.5°	113.2	131.5	177.7	245.3	300.7
40°	84.6	103.5	151.0	223.2	281.1
42.5°	56.6	76.8	125.6	200.4	262.9
45°	31.2	50.1	102.2	180.9	244.7
47.5°	16.3	27.3	80.0	161.4	225.2
50°	12.4	15.0	59.2	139.9	203.0
52.5°	10.4	11.1	40.3	118.4	180.9
55°	8.5	9.1	27.3	99.6	158.1
57.5°	6.5	7.2	19.5	81.3	132.8
60°	5.2	5.9	16.3	62.5	109.3
62.5°	3.9	4.6	15.6	46.2	85.9
65°	3.3	3.9	13.7	31.2	63.1
67.5°	2.6	3.9	11.7	20.2	42.3
70°	2.6	5.2	9.8	13.0	23.4
72.5°	2.6	5.9	8.5	8.5	8.5
75°	2.6	7.2	7.8	7.2	7.2
77.5°	2.6	6.5	6.5	6.5	6.5
80°	2.6	5.9	5.9	5.9	5.2
82.5°	2.6	5.2	5.9	5.9	4.6
85°	2.6	5.2	5.2	5.2	3.9
87.5°	2.0	5.2	5.2	5.2	2.6
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	13.45	14.73	13.82	15.04	15.35
	3H	0.00	0.00	0.00	0.00	0.00	13.81	14.93	14.19	15.27	15.63
	4H	0.00	0.00	0.00	0.00	0.16	13.77	14.82	14.18	15.17	15.56
	6H	0.00	0.70	0.15	1.07	1.46	13.75	14.71	14.16	15.08	15.48
	8H	0.41	1.32	0.84	1.71	2.12	13.74	14.65	14.17	15.04	15.45
	12H	1.21	2.08	1.64	2.46	2.89	13.74	14.61	14.17	14.99	15.42
4H	2H	0.00	0.22	0.00	0.57	0.96	13.25	14.30	13.66	14.65	15.04
	3H	0.59	1.45	1.00	1.85	2.26	13.65	14.50	14.06	14.91	15.31
	4H	2.05	2.81	2.48	3.23	3.67	13.63	14.39	14.07	14.81	15.26
	6H	3.29	3.95	3.75	4.39	4.86	13.65	14.31	14.11	14.75	15.22
	8H	3.85	4.47	4.32	4.92	5.39	13.66	14.27	14.13	14.72	15.19
	12H	4.52	5.07	5.01	5.55	6.03	13.70	14.24	14.18	14.72	15.20
8H	4H	3.12	3.73	3.59	4.18	4.65	13.53	14.15	14.00	14.59	15.06
	6H	4.73	5.23	5.23	5.73	6.21	13.58	14.08	14.09	14.58	15.06
	8H	5.56	6.01	6.08	6.53	7.02	13.64	14.09	14.16	14.61	15.10
	12H	6.52	6.92	7.03	7.41	7.99	13.76	14.16	14.27	14.65	15.22
12H	4H	3.31	3.85	3.79	4.33	4.81	13.49	14.04	13.98	14.52	14.99
	6H	5.08	5.53	5.60	6.05	6.54	13.55	14.00	14.07	14.52	15.01
	8H	6.09	6.49	6.61	6.99	7.56	13.66	14.06	14.17	14.55	15.12