

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: P1060636

Luminaire Tested: S124RDR-H1020D835-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060636  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D835-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

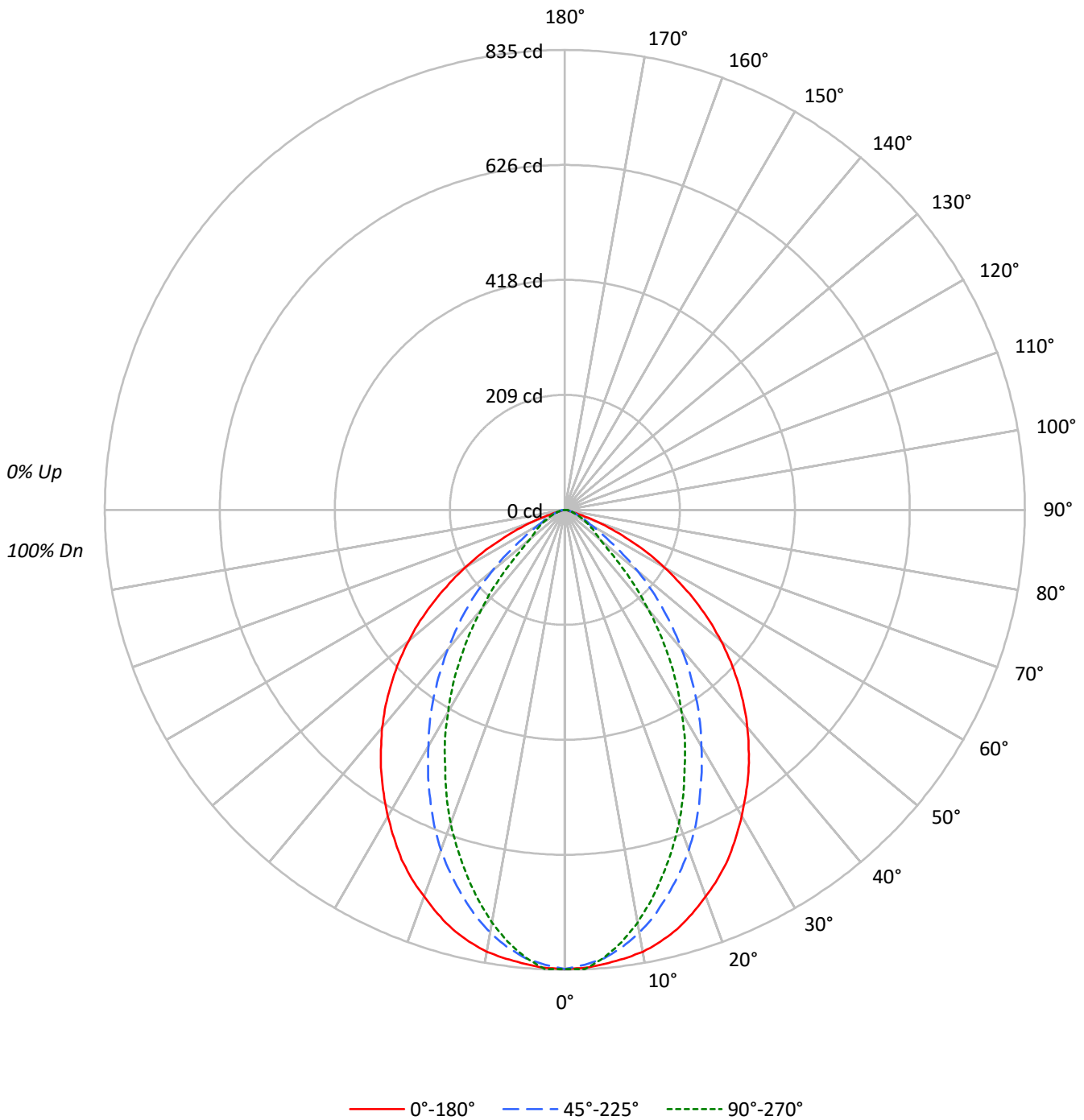
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1229.0 lumens  
Efficiency: N/A  
Efficacy: 39.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	97	98	96	94	95	93	92	90			90	
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80			80	
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71			71	
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63			63	
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57			57	
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51			51	
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47			47	
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43			43	
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39	
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36			36	

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

	0°	45°	90°
0°	7178	7178	7178
5°	7155	7064	7054
10°	7125	6817	6652
15°	7023	6447	6123
20°	6843	6025	5551
25°	6659	5499	4887
30°	6386	4927	4214
35°	6110	4357	3481
40°	5794	3708	2639
45°	5419	3031	1773
50°	4954	2296	1101
55°	4354	1516	934
60°	3599	930	768
65°	2608	717	621
70°	1420	531	473
75°	313	389	429
80°	233	293	347
85°	227	227	346

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5419 cd/sqm

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CATALOG NUMBER: S124RDR-H1020D835-X4F0-XX-UDD-SVL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.2	6.3
10°-20°	205.1	16.7
20°-30°	271.7	22.1
30°-40°	269.7	21.9
40°-50°	207.5	16.9
50°-60°	123.7	10.1
60°-70°	56.2	4.6
70°-80°	14.5	1.2
80°-90°	3.2	0.3
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°	554.1	45.1
0°-40°	823.8	67.0
0°-60°	1155.0	94.0
0°-90°	1229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1229.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	828	829	817	817	816	79
15°	788	768	723	699	687	222
25°	701	650	579	531	514	322
35°	581	508	414	351	331	363
45°	445	358	249	174	146	343
55°	290	207	101	63	62	258
65°	128	76	35	30	30	129
75°	9	12	12	13	13	20
85°	2	2	2	4	4	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	833.6	833.6	833.6	833.6	833.6
2.5°	832.4	833.6	826.6	832.4	834.8
5°	827.7	828.9	817.2	817.2	816.0
7.5°	821.9	819.5	800.7	793.7	791.3
10°	814.8	806.6	779.6	765.5	760.8
12.5°	803.1	790.2	753.8	733.8	725.6
15°	787.8	767.9	723.2	698.6	686.8
17.5°	769.0	744.4	691.5	659.8	646.9
20°	746.7	713.9	657.5	617.6	605.8
22.5°	725.6	684.5	619.9	574.1	561.2
25°	700.9	650.4	578.8	530.7	514.3
27.5°	671.6	617.6	537.7	488.4	472.0
30°	642.2	582.4	495.5	443.8	423.8
32.5°	611.7	546.0	456.7	398.0	379.2
35°	581.2	508.4	414.5	351.1	331.1
37.5°	548.3	470.8	372.2	306.4	284.1
40°	515.4	434.4	329.9	263.0	234.8
42.5°	481.4	396.8	288.8	218.4	190.2
45°	445.0	358.1	248.9	173.8	145.6
47.5°	408.6	321.7	209.0	130.3	104.5
50°	369.8	283.0	171.4	95.1	82.2
52.5°	331.1	245.4	133.8	74.0	70.4
55°	290.0	206.6	101.0	63.4	62.2
57.5°	247.7	171.4	72.8	55.2	52.8
60°	209.0	138.5	54.0	47.0	44.6
62.5°	169.1	104.5	44.6	38.7	36.4
65°	128.0	76.3	35.2	30.5	30.5
67.5°	92.8	51.7	28.2	24.7	23.5
70°	56.4	31.7	21.1	20.0	18.8
72.5°	28.2	18.8	16.4	15.3	15.3
75°	9.4	11.7	11.7	12.9	12.9
77.5°	7.0	8.2	8.2	9.4	9.4
80°	4.7	5.9	5.9	7.0	7.0
82.5°	3.5	3.5	4.7	4.7	5.9
85°	2.3	2.3	2.3	3.5	3.5
87.5°	1.2	1.2	1.2	2.3	2.3
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	15.97	17.30	16.33	17.61	17.93	7.52	8.85	7.88	9.17	9.48
	3H	16.48	17.66	16.86	17.99	18.35	8.34	9.52	8.72	9.85	10.21
	4H	16.44	17.54	16.84	17.89	18.27	8.62	9.72	9.02	10.07	10.45
	6H	16.38	17.39	16.79	17.76	18.15	8.79	9.80	9.20	10.17	10.56
	8H	16.34	17.29	16.77	17.68	18.09	8.85	9.81	9.28	10.20	10.60
	12H	16.30	17.21	16.73	17.60	18.03	8.90	9.81	9.33	10.19	10.62
4H	2H	15.81	16.91	16.21	17.26	17.64	7.96	9.06	8.36	9.41	9.79
	3H	16.36	17.26	16.78	17.66	18.06	8.92	9.82	9.34	10.22	10.63
	4H	16.33	17.13	16.77	17.55	17.99	9.29	10.08	9.72	10.50	10.95
	6H	16.28	16.96	16.74	17.41	17.88	9.54	10.22	10.00	10.67	11.14
	8H	16.23	16.87	16.70	17.32	17.79	9.63	10.27	10.10	10.71	11.18
	12H	16.19	16.76	16.68	17.24	17.72	9.70	10.27	10.19	10.75	11.22
8H	4H	16.22	16.86	16.69	17.31	17.78	9.38	10.01	9.84	10.46	10.93
	6H	16.16	16.68	16.66	17.18	17.66	9.68	10.21	10.19	10.70	11.18
	8H	16.11	16.58	16.63	17.10	17.59	9.82	10.28	10.34	10.80	11.29
	12H	16.08	16.49	16.60	16.99	17.56	9.95	10.36	10.47	10.86	11.43
12H	4H	16.18	16.74	16.67	17.23	17.70	9.35	9.91	9.84	10.40	10.87
	6H	16.10	16.57	16.63	17.09	17.58	9.66	10.13	10.19	10.65	11.14
	8H	16.08	16.49	16.59	16.99	17.56	9.83	10.25	10.35	10.74	11.32