

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: P1060633

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060633  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D835-X4F0-XX-UDD-BVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

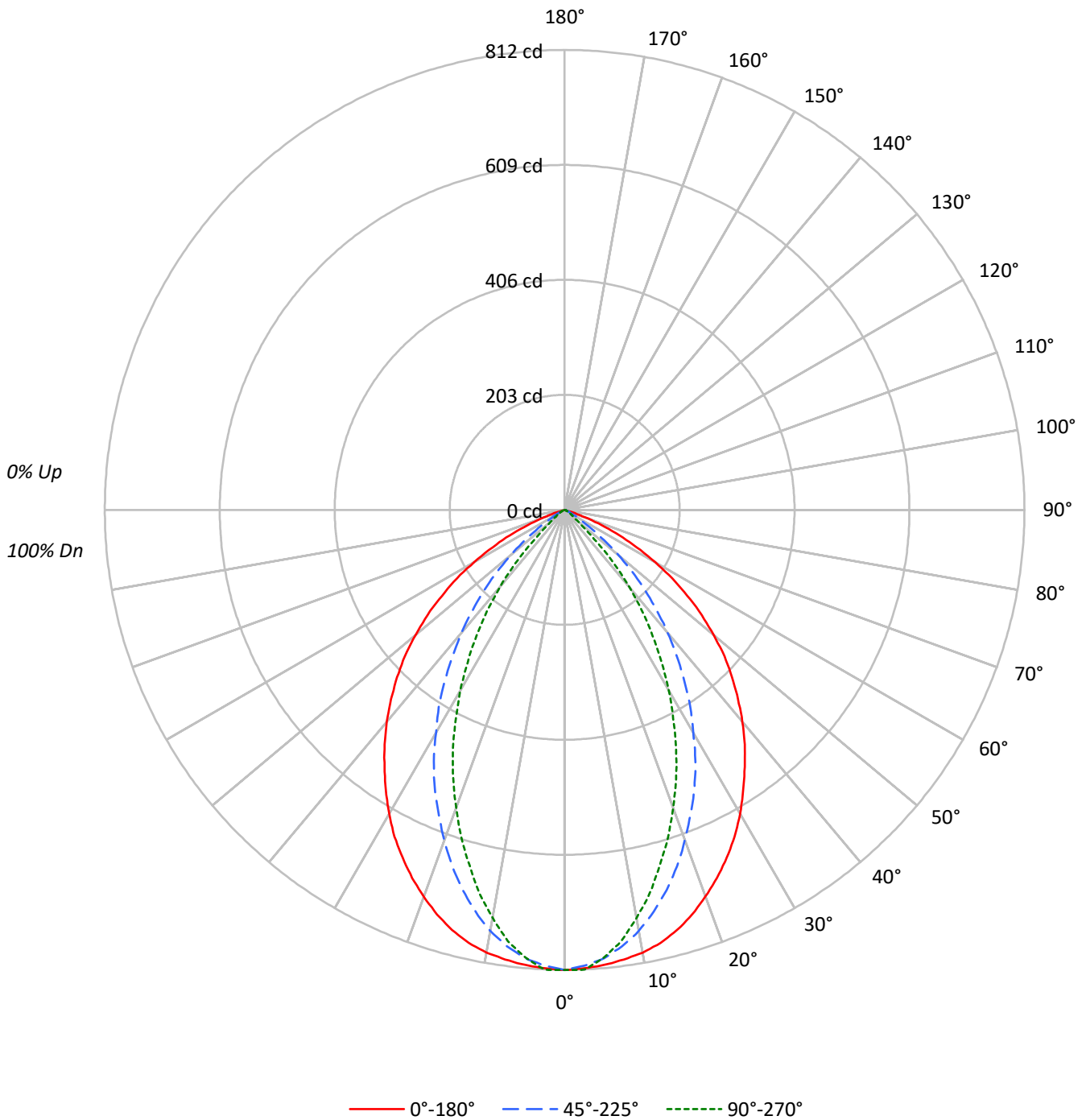
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1060.9 lumens  
Efficiency: N/A  
Efficacy: 34.0 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	6997	6997	6997
5°	6972	6871	6861
10°	6940	6602	6396
15°	6846	6197	5788
20°	6660	5692	5133
25°	6437	5154	4429
30°	6164	4518	3666
35°	5826	3876	2851
40°	5490	3181	1993
45°	5090	2445	986
50°	4592	1652	331
55°	3966	847	230
60°	3174	303	162
65°	2176	167	71
70°	974	88	58
75°	0	40	40
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5090 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.0	7.1
10°-20°	196.7	18.5
20°-30°	254.6	24.0
30°-40°	241.9	22.8
40°-50°	171.3	16.1
50°-60°	87.9	8.3
60°-70°	30.8	2.9
70°-80°	2.7	0.3
80°-90°	0.0	0.0
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°	526.3	49.6
0°-40°	768.3	72.4
0°-60°	1027.5	96.9
0°-90°	1060.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1060.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	807	808	795	795	794	77
15°	768	744	695	662	649	216
25°	678	625	542	485	466	312
35°	554	473	369	297	271	347
45°	418	322	201	115	81	322
55°	264	174	56	16	15	236
65°	107	52	8	5	4	106
75°	0	1	1	1	1	9
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	812.5	812.5	812.5	812.5	812.5
2.5°	810.1	812.5	805.4	811.3	812.5
5°	806.6	807.8	794.9	794.9	793.7
7.5°	800.7	798.4	777.3	769.0	767.9
10°	793.7	785.5	755.0	737.3	731.5
12.5°	783.1	767.9	726.8	700.9	693.9
15°	767.9	744.4	695.1	662.2	649.3
17.5°	749.1	718.6	659.9	619.9	607.0
20°	726.8	688.0	621.1	576.5	560.1
22.5°	703.3	658.7	581.2	530.7	514.3
25°	677.5	624.6	542.4	484.9	466.1
27.5°	650.5	588.2	500.2	440.3	415.6
30°	619.9	551.8	454.4	392.2	368.7
32.5°	587.1	511.9	413.3	346.4	318.2
35°	554.2	473.2	368.7	297.1	271.2
37.5°	522.5	436.8	324.1	248.9	224.3
40°	488.4	396.8	283.0	205.5	177.3
42.5°	453.2	358.1	240.7	160.9	130.3
45°	418.0	321.7	200.8	115.1	81.0
47.5°	382.8	283.0	162.0	72.8	43.4
50°	342.8	245.4	123.3	38.7	24.7
52.5°	305.3	210.2	88.1	22.3	18.8
55°	264.2	173.8	56.4	16.4	15.3
57.5°	225.4	138.5	31.7	12.9	11.7
60°	184.3	106.8	17.6	10.6	9.4
62.5°	143.2	77.5	11.7	7.0	5.9
65°	106.8	51.7	8.2	4.7	3.5
67.5°	70.4	29.4	5.9	2.3	2.3
70°	38.7	14.1	3.5	2.3	2.3
72.5°	14.1	4.7	2.3	1.2	1.2
75°	0.0	1.2	1.2	1.2	1.2
77.5°	0.0	0.0	0.0	0.0	1.2
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	15.29	16.54	15.65	16.85	17.17	0.00	0.00	0.00	0.00	0.00
	3H	15.56	16.67	15.94	17.00	17.36	0.00	0.00	0.00	0.00	0.00
	4H	15.49	16.51	15.89	16.86	17.25	0.00	0.00	0.00	0.00	0.00
	6H	15.40	16.34	15.82	16.71	17.11	0.00	0.00	0.00	0.00	0.00
	8H	15.35	16.24	15.79	16.63	17.04	0.00	0.00	0.00	0.00	0.00
	12H	15.31	16.15	15.74	16.54	16.97	0.00	0.00	0.00	0.00	0.00
4H	2H	15.06	16.08	15.46	16.44	16.82	0.00	0.00	0.00	0.00	0.16
	3H	15.34	16.17	15.76	16.58	16.98	0.00	0.00	0.00	0.00	0.17
	4H	15.25	15.99	15.69	16.41	16.85	0.00	0.00	0.00	0.00	0.12
	6H	15.16	15.79	15.63	16.24	16.71	0.00	0.00	0.00	0.00	0.01
	8H	15.10	15.69	15.57	16.14	16.61	0.00	0.00	0.00	0.00	0.00
	12H	15.05	15.57	15.54	16.05	16.53	0.00	0.00	0.00	0.00	0.00
8H	4H	15.10	15.69	15.57	16.14	16.61	0.00	0.00	0.00	0.00	0.09
	6H	14.99	15.47	15.50	15.97	16.45	0.00	0.00	0.00	0.00	0.00
	8H	14.93	15.35	15.45	15.87	16.36	0.00	0.00	0.00	0.00	0.00
	12H	14.88	15.25	15.39	15.75	16.32	0.00	0.00	0.00	0.00	0.00
12H	4H	15.05	15.57	15.54	16.05	16.53	0.00	0.00	0.00	0.00	0.01
	6H	14.93	15.35	15.45	15.87	16.36	0.00	0.00	0.00	0.00	0.00
	8H	14.88	15.25	15.39	15.75	16.32	0.00	0.00	0.00	0.00	0.00