

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: P1060663

Luminaire Tested: S124RDR-H1020D927-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060663  
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-H1020D927-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: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

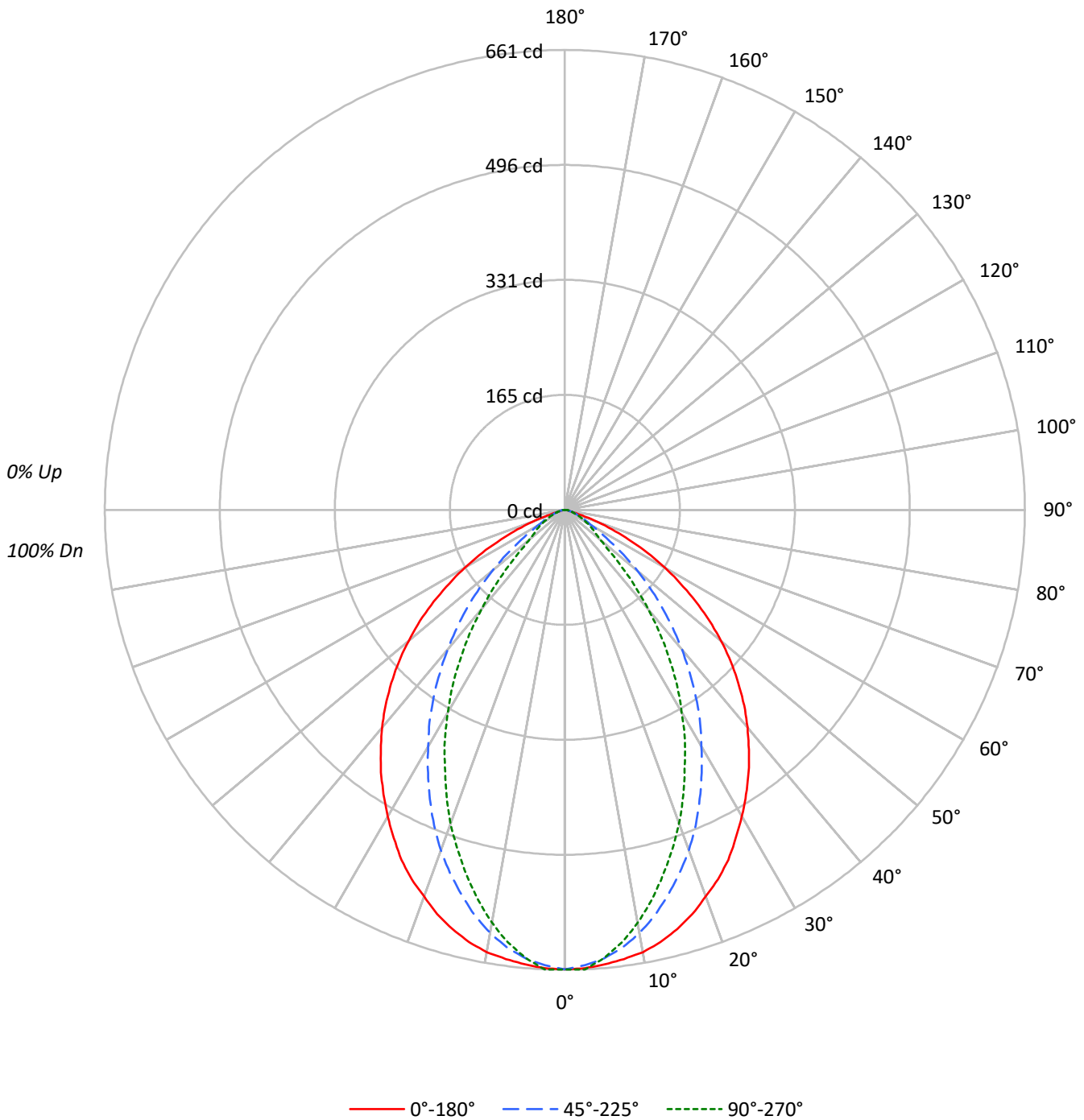
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 973.6 lumens  
Efficiency: N/A  
Efficacy: 31.2 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										
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	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°	5687	5687	5687
5°	5668	5595	5587
10°	5644	5400	5270
15°	5564	5107	4851
20°	5420	4773	4398
25°	5276	4356	3871
30°	5059	3903	3339
35°	4840	3451	2757
40°	4590	2938	2091
45°	4293	2401	1404
50°	3925	1819	872
55°	3448	1201	740
60°	2852	737	608
65°	2066	568	493
70°	1123	420	375
75°	246	309	339
80°	183	233	278
85°	188	188	277

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4293 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.2	6.3
10°-20°	162.5	16.7
20°-30°	215.3	22.1
30°-40°	213.7	21.9
40°-50°	164.4	16.9
50°-60°	98.0	10.1
60°-70°	44.5	4.6
70°-80°	11.5	1.2
80°-90°	2.6	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°	438.9	45.1
0°-40°	652.6	67.0
0°-60°	915.0	94.0
0°-90°	973.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	973.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	656	657	647	647	646	62
15°	624	608	573	553	544	176
25°	555	515	458	420	407	255
35°	460	403	328	278	262	287
45°	352	284	197	138	115	271
55°	230	164	80	50	49	205
65°	101	60	28	24	24	102
75°	7	9	9	10	10	16
85°	2	2	2	3	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	660.4	660.4	660.4	660.4	660.4
2.5°	659.4	660.4	654.8	659.4	661.3
5°	655.7	656.6	647.3	647.3	646.4
7.5°	651.1	649.2	634.3	628.7	626.9
10°	645.5	639.0	617.6	606.4	602.7
12.5°	636.2	626.0	597.1	581.3	574.8
15°	624.1	608.3	572.9	553.4	544.1
17.5°	609.2	589.7	547.8	522.7	512.5
20°	591.5	565.5	520.9	489.2	479.9
22.5°	574.8	542.2	491.1	454.8	444.6
25°	555.3	515.3	458.5	420.4	407.4
27.5°	532.0	489.2	426.0	386.9	373.9
30°	508.8	461.3	392.5	351.6	335.8
32.5°	484.6	432.5	361.8	315.3	300.4
35°	460.4	402.7	328.3	278.1	262.3
37.5°	434.4	373.0	294.8	242.8	225.1
40°	408.3	344.1	261.4	208.3	186.0
42.5°	381.3	314.4	228.8	173.0	150.7
45°	352.5	283.7	197.2	137.7	115.3
47.5°	323.7	254.8	165.6	103.2	82.8
50°	293.0	224.2	135.8	75.3	65.1
52.5°	262.3	194.4	106.0	58.6	55.8
55°	229.7	163.7	80.0	50.2	49.3
57.5°	196.3	135.8	57.7	43.7	41.9
60°	165.6	109.8	42.8	37.2	35.3
62.5°	133.9	82.8	35.3	30.7	28.8
65°	101.4	60.5	27.9	24.2	24.2
67.5°	73.5	40.9	22.3	19.5	18.6
70°	44.6	25.1	16.7	15.8	14.9
72.5°	22.3	14.9	13.0	12.1	12.1
75°	7.4	9.3	9.3	10.2	10.2
77.5°	5.6	6.5	6.5	7.4	7.4
80°	3.7	4.7	4.7	5.6	5.6
82.5°	2.8	2.8	3.7	3.7	4.7
85°	1.9	1.9	1.9	2.8	2.8
87.5°	0.9	0.9	0.9	1.9	1.9
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	15.16	16.49	15.52	16.81	17.12	6.71	8.04	7.07	8.35	8.67
	3H	15.67	16.85	16.05	17.18	17.54	7.52	8.70	7.90	9.03	9.40
	4H	15.63	16.73	16.04	17.08	17.46	7.80	8.90	8.21	9.25	9.64
	6H	15.57	16.58	15.98	16.95	17.34	7.97	8.98	8.39	9.35	9.75
	8H	15.53	16.48	15.96	16.88	17.28	8.04	9.00	8.47	9.39	9.79
	12H	15.49	16.40	15.92	16.79	17.22	8.09	9.00	8.52	9.38	9.81
4H	2H	15.00	16.10	15.40	16.45	16.83	7.15	8.25	7.55	8.60	8.98
	3H	15.55	16.45	15.97	16.85	17.25	8.11	9.00	8.52	9.41	9.81
	4H	15.52	16.32	15.96	16.74	17.18	8.47	9.27	8.91	9.69	10.13
	6H	15.47	16.16	15.93	16.60	17.07	8.72	9.41	9.19	9.86	10.32
	8H	15.42	16.06	15.89	16.51	16.98	8.81	9.45	9.28	9.90	10.37
	12H	15.39	15.95	15.87	16.43	16.91	8.89	9.45	9.38	9.94	10.41
8H	4H	15.41	16.05	15.88	16.50	16.97	8.56	9.20	9.03	9.65	10.12
	6H	15.35	15.87	15.85	16.37	16.85	8.87	9.39	9.37	9.89	10.37
	8H	15.30	15.77	15.83	16.29	16.78	9.00	9.47	9.53	9.99	10.48
	12H	15.27	15.69	15.79	16.18	16.75	9.14	9.56	9.66	10.05	10.62
12H	4H	15.37	15.93	15.86	16.42	16.89	8.54	9.10	9.02	9.58	10.06
	6H	15.30	15.76	15.82	16.28	16.77	8.85	9.32	9.37	9.84	10.33
	8H	15.27	15.68	15.78	16.18	16.75	9.02	9.44	9.54	9.93	10.50