

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: P1060669

Luminaire Tested: S124RDR-H1020D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060669
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-H1020D930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

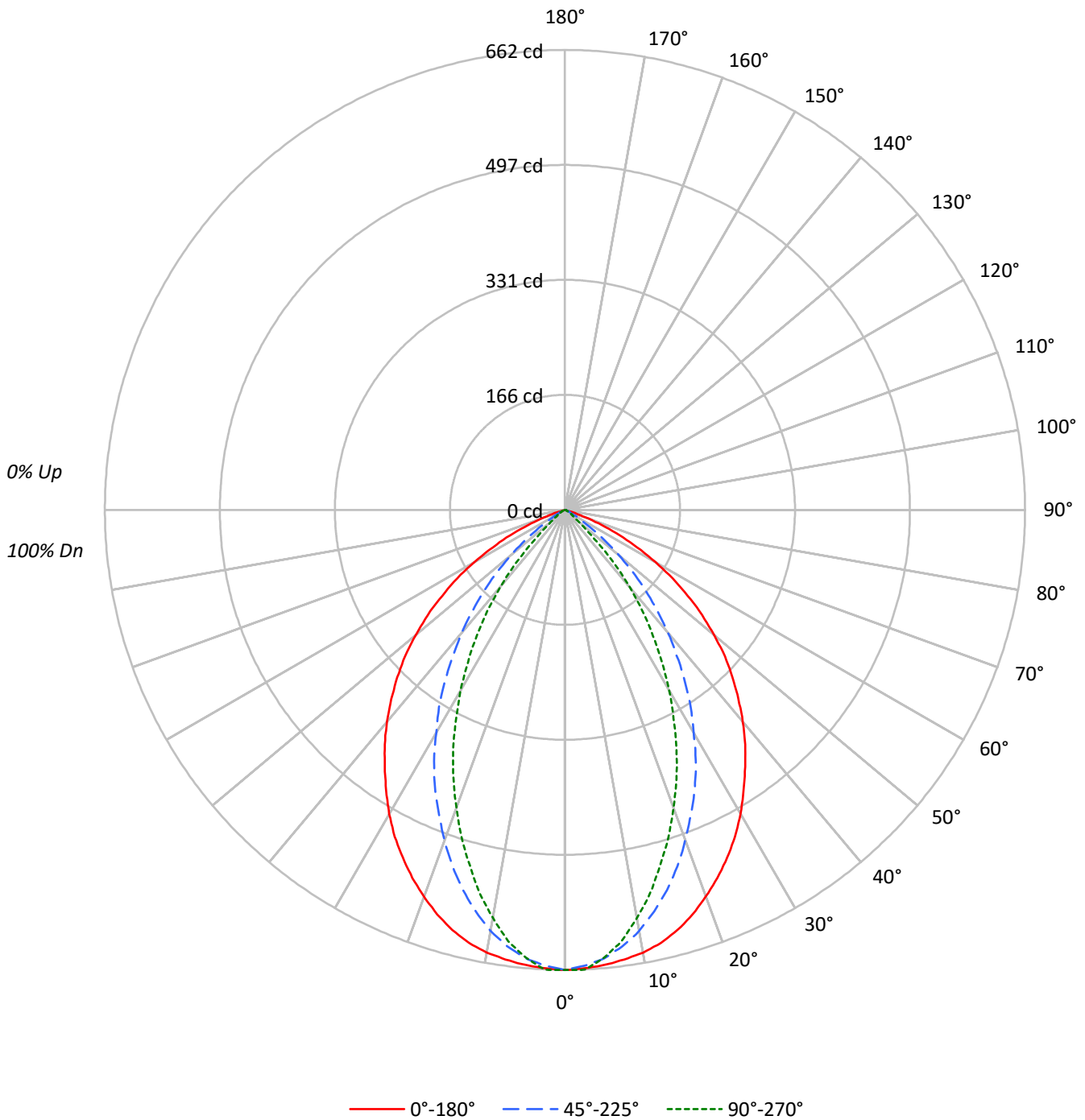
Lumens per Lamp: N/A
Luminaire Lumens: 865.0 lumens
Efficiency: N/A
Efficacy: 27.7 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	5704	5704	5704
5°	5684	5602	5594
10°	5658	5382	5215
15°	5581	5052	4720
20°	5430	4641	4184
25°	5248	4201	3611
30°	5025	3684	2989
35°	4749	3160	2324
40°	4476	2593	1624
45°	4150	1994	805
50°	3744	1346	269
55°	3234	689	186
60°	2589	248	133
65°	1775	137	59
70°	796	73	48
75°	0	33	33
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4150 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	7.1
10°-20°	160.3	18.5
20°-30°	207.6	24.0
30°-40°	197.2	22.8
40°-50°	139.7	16.1
50°-60°	71.7	8.3
60°-70°	25.1	2.9
70°-80°	2.2	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°	429.1	49.6
0°-40°	626.3	72.4
0°-60°	837.7	96.8
0°-90°	865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	662	662	662	662	662	
5°	658	659	648	648	647	62
15°	626	607	567	540	529	176
25°	552	509	442	395	380	254
35°	452	386	301	242	221	283
45°	341	262	164	94	66	262
55°	215	142	46	13	12	192
65°	87	42	7	4	3	87
75°	0	1	1	1	1	7
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°	662.4	662.4	662.4	662.4	662.4
2.5°	660.5	662.4	656.7	661.5	662.4
5°	657.6	658.6	648.1	648.1	647.1
7.5°	652.8	650.9	633.7	627.0	626.0
10°	647.1	640.4	615.5	601.2	596.4
12.5°	638.5	626.0	592.5	571.5	565.7
15°	626.0	606.9	566.7	539.9	529.4
17.5°	610.7	585.8	538.0	505.4	494.9
20°	592.5	560.9	506.4	470.0	456.6
22.5°	573.4	537.0	473.8	432.7	419.3
25°	552.3	509.3	442.2	395.3	380.0
27.5°	530.3	479.6	407.8	359.0	338.9
30°	505.4	449.9	370.5	319.7	300.6
32.5°	478.6	417.4	337.0	282.4	259.4
35°	451.8	385.8	300.6	242.2	221.1
37.5°	426.0	356.1	264.2	202.9	182.8
40°	398.2	323.6	230.7	167.5	144.5
42.5°	369.5	292.0	196.2	131.1	106.3
45°	340.8	262.3	163.7	93.8	66.1
47.5°	312.1	230.7	132.1	59.3	35.4
50°	279.5	200.1	100.5	31.6	20.1
52.5°	248.9	171.3	71.8	18.2	15.3
55°	215.4	141.7	45.9	13.4	12.4
57.5°	183.8	113.0	25.8	10.5	9.6
60°	150.3	87.1	14.4	8.6	7.7
62.5°	116.8	63.2	9.6	5.7	4.8
65°	87.1	42.1	6.7	3.8	2.9
67.5°	57.4	23.9	4.8	1.9	1.9
70°	31.6	11.5	2.9	1.9	1.9
72.5°	11.5	3.8	1.9	1.0	1.0
75°	0.0	1.0	1.0	1.0	1.0
77.5°	0.0	0.0	0.0	0.0	1.0
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	14.58	15.84	14.94	16.15	16.46	0.00	0.00	0.00	0.00	0.00
	3H	14.86	15.96	15.24	16.29	16.66	0.00	0.00	0.00	0.00	0.00
	4H	14.78	15.81	15.18	16.16	16.54	0.00	0.00	0.00	0.00	0.00
	6H	14.69	15.63	15.11	16.00	16.40	0.00	0.00	0.00	0.00	0.00
	8H	14.65	15.53	15.08	15.93	16.33	0.00	0.00	0.00	0.00	0.00
	12H	14.60	15.45	15.04	15.83	16.26	0.00	0.00	0.00	0.00	0.00
4H	2H	14.35	15.38	14.76	15.73	16.11	0.00	0.00	0.00	0.00	0.00
	3H	14.64	15.46	15.05	15.87	16.27	0.00	0.00	0.00	0.00	0.00
	4H	14.54	15.28	14.98	15.70	16.14	0.00	0.00	0.00	0.00	0.00
	6H	14.46	15.09	14.92	15.53	16.00	0.00	0.00	0.00	0.00	0.00
	8H	14.39	14.98	14.87	15.43	15.90	0.00	0.00	0.00	0.00	0.00
	12H	14.34	14.86	14.83	15.34	15.82	0.00	0.00	0.00	0.00	0.00
8H	4H	14.40	14.98	14.87	15.43	15.90	0.00	0.00	0.00	0.00	0.00
	6H	14.29	14.76	14.79	15.26	15.74	0.00	0.00	0.00	0.00	0.00
	8H	14.22	14.65	14.74	15.17	15.66	0.00	0.00	0.00	0.00	0.00
	12H	14.17	14.55	14.69	15.04	15.62	0.00	0.00	0.00	0.00	0.00
12H	4H	14.34	14.86	14.83	15.34	15.82	0.00	0.00	0.00	0.00	0.00
	6H	14.22	14.65	14.74	15.17	15.66	0.00	0.00	0.00	0.00	0.00
	8H	14.17	14.55	14.69	15.04	15.62	0.00	0.00	0.00	0.00	0.00