

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: P1060624

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060624
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-H1020D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

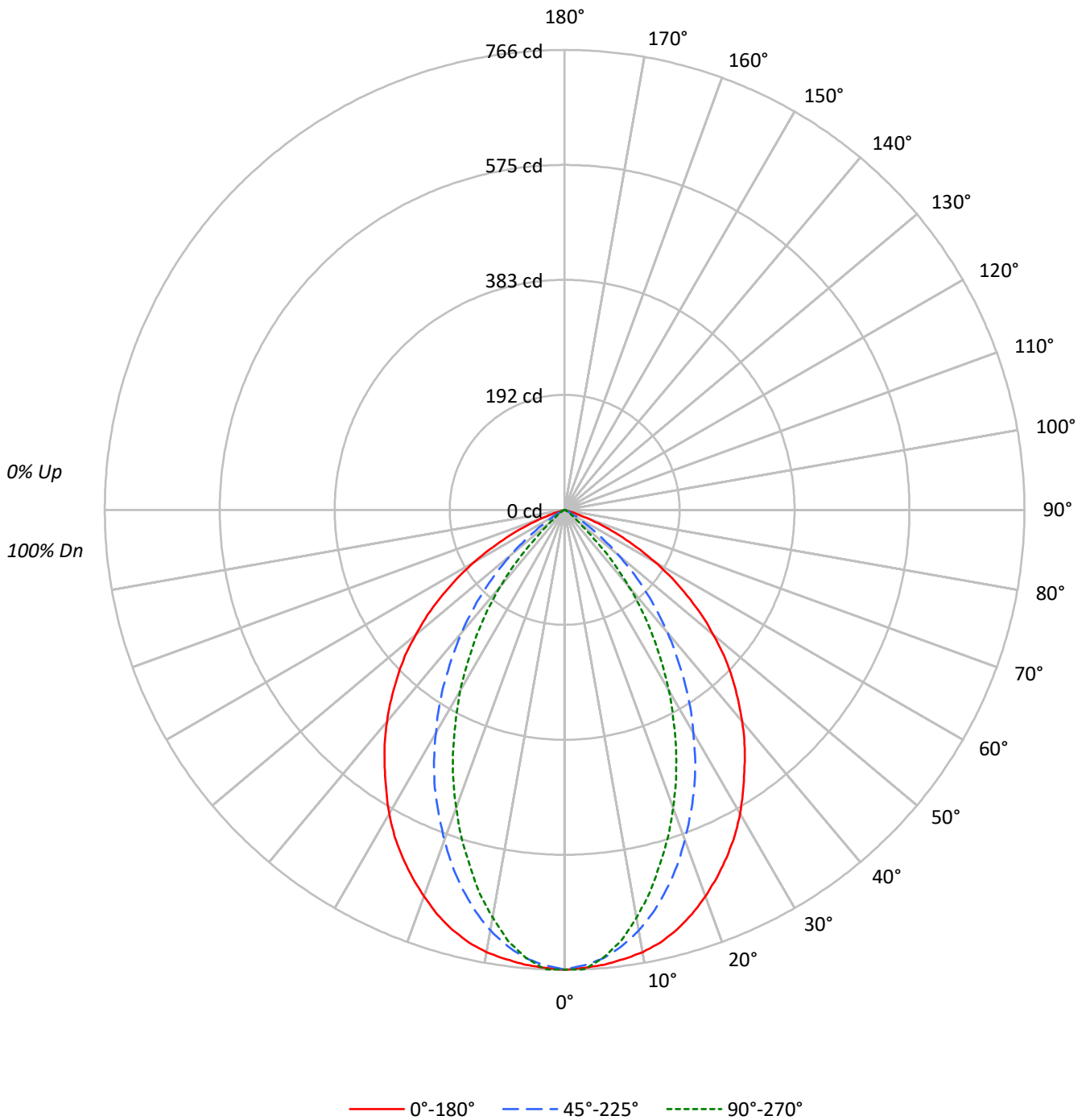
Lumens per Lamp: N/A
Luminaire Lumens: 999.9 lumens
Efficiency: N/A
Efficacy: 32.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	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	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82				82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6594	6594	6594
5°	6572	6476	6467
10°	6541	6222	6028
15°	6452	5840	5456
20°	6277	5364	4838
25°	6067	4858	4174
30°	5810	4259	3455
35°	5491	3653	2687
40°	5175	2998	1878
45°	4798	2304	930
50°	4328	1557	311
55°	3738	797	216
60°	2992	286	153
65°	2052	157	67
70°	919	83	55
75°	0	37	37
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	7.1
10°-20°	185.4	18.5
20°-30°	240.0	24.0
30°-40°	228.0	22.8
40°-50°	161.5	16.1
50°-60°	82.9	8.3
60°-70°	29.0	2.9
70°-80°	2.5	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°	496.1	49.6
0°-40°	724.1	72.4
0°-60°	968.5	96.9
0°-90°	999.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	999.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	766	766	766	766	766	
5°	760	761	749	749	748	72
15°	724	702	655	624	612	203
25°	638	589	511	457	439	294
35°	522	446	348	280	256	327
45°	394	303	189	108	76	303
55°	249	164	53	16	14	222
65°	101	49	8	4	3	100
75°	0	1	1	1	1	8
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°	765.8	765.8	765.8	765.8	765.8
2.5°	763.6	765.8	759.2	764.7	765.8
5°	760.3	761.4	749.2	749.2	748.1
7.5°	754.7	752.5	732.6	724.9	723.7
10°	748.1	740.3	711.6	695.0	689.4
12.5°	738.1	723.7	685.0	660.7	654.0
15°	723.7	701.6	655.1	624.2	612.0
17.5°	706.0	677.3	621.9	584.3	572.1
20°	685.0	648.5	585.4	543.4	527.9
22.5°	662.9	620.8	547.8	500.2	484.7
25°	638.5	588.7	511.3	457.0	439.3
27.5°	613.1	554.4	471.4	415.0	391.8
30°	584.3	520.1	428.3	369.6	347.5
32.5°	553.3	482.5	389.5	326.5	299.9
35°	522.3	446.0	347.5	280.0	255.6
37.5°	492.5	411.7	305.4	234.6	211.4
40°	460.4	374.0	266.7	193.7	167.1
42.5°	427.2	337.5	226.9	151.6	122.8
45°	394.0	303.2	189.2	108.5	76.4
47.5°	360.8	266.7	152.7	68.6	40.9
50°	323.1	231.3	116.2	36.5	23.2
52.5°	287.7	198.1	83.0	21.0	17.7
55°	249.0	163.8	53.1	15.5	14.4
57.5°	212.5	130.6	29.9	12.2	11.1
60°	173.7	100.7	16.6	10.0	8.9
62.5°	135.0	73.0	11.1	6.6	5.5
65°	100.7	48.7	7.7	4.4	3.3
67.5°	66.4	27.7	5.5	2.2	2.2
70°	36.5	13.3	3.3	2.2	2.2
72.5°	13.3	4.4	2.2	1.1	1.1
75°	0.0	1.1	1.1	1.1	1.1
77.5°	0.0	0.0	0.0	0.0	1.1
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	15.08	16.34	15.45	16.65	16.97	0.00	0.00	0.00	0.00	0.00
	3H	15.36	16.47	15.74	16.80	17.16	0.00	0.00	0.00	0.00	0.00
	4H	15.28	16.31	15.69	16.66	17.05	0.00	0.00	0.00	0.00	0.00
	6H	15.20	16.14	15.61	16.51	16.90	0.00	0.00	0.00	0.00	0.00
	8H	15.15	16.04	15.58	16.43	16.84	0.00	0.00	0.00	0.00	0.00
	12H	15.11	15.95	15.54	16.33	16.77	0.00	0.00	0.00	0.00	0.00
4H	2H	14.86	15.88	15.26	16.23	16.62	0.00	0.00	0.00	0.00	0.00
	3H	15.14	15.97	15.55	16.37	16.78	0.00	0.00	0.00	0.00	0.00
	4H	15.05	15.78	15.48	16.20	16.65	0.00	0.00	0.00	0.00	0.00
	6H	14.96	15.59	15.42	16.04	16.51	0.00	0.00	0.00	0.00	0.00
	8H	14.90	15.49	15.37	15.93	16.41	0.00	0.00	0.00	0.00	0.00
	12H	14.85	15.36	15.33	15.85	16.32	0.00	0.00	0.00	0.00	0.00
8H	4H	14.90	15.49	15.37	15.93	16.41	0.00	0.00	0.00	0.00	0.00
	6H	14.79	15.27	15.29	15.77	16.25	0.00	0.00	0.00	0.00	0.00
	8H	14.72	15.15	15.25	15.67	16.16	0.00	0.00	0.00	0.00	0.00
	12H	14.67	15.05	15.19	15.55	16.12	0.00	0.00	0.00	0.00	0.00
12H	4H	14.85	15.36	15.33	15.85	16.32	0.00	0.00	0.00	0.00	0.00
	6H	14.72	15.15	15.25	15.67	16.16	0.00	0.00	0.00	0.00	0.00
	8H	14.67	15.05	15.19	15.55	16.12	0.00	0.00	0.00	0.00	0.00