

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: P1060702

Luminaire Tested: S124RDR-H1020D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D950-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

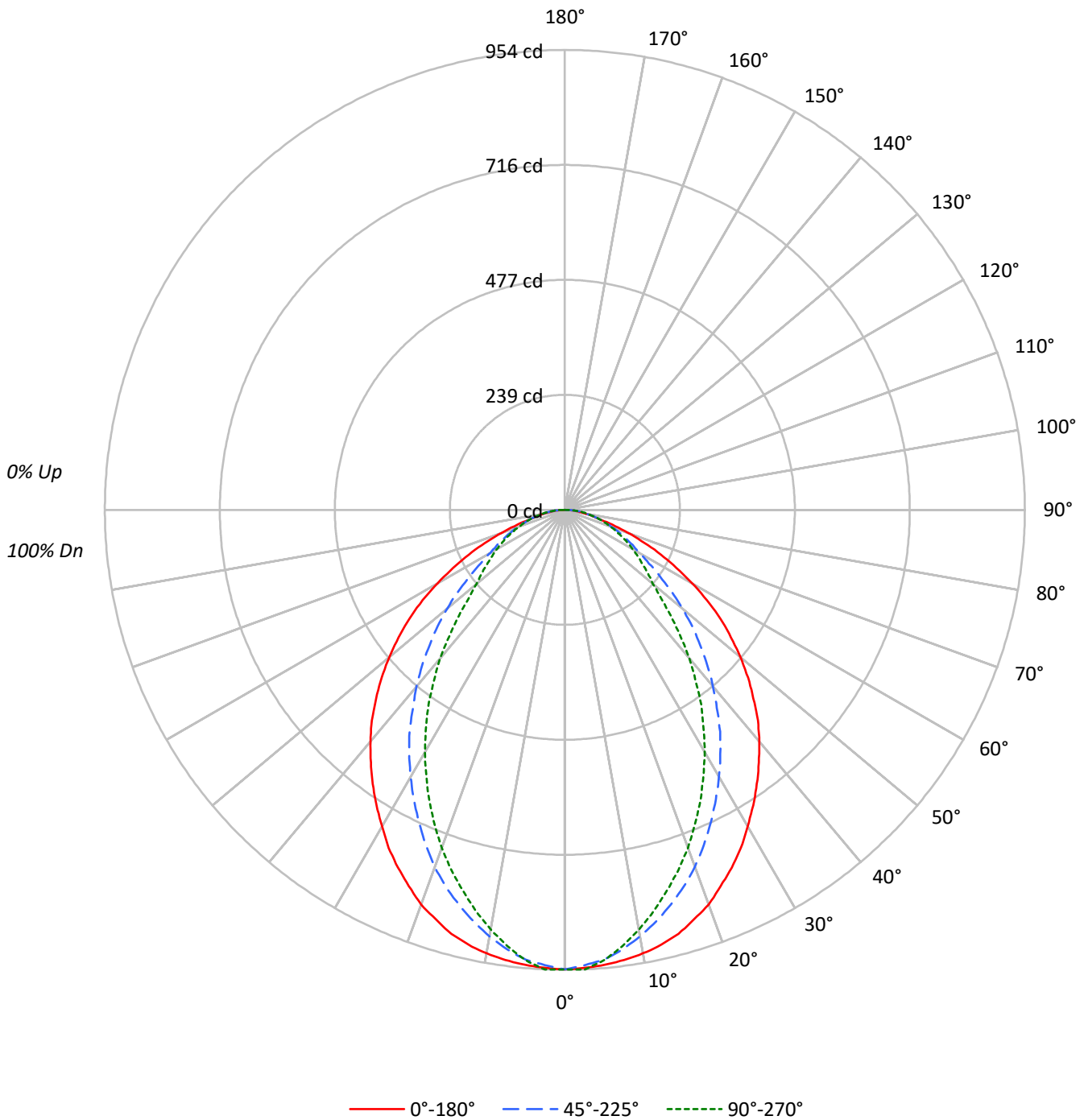
Lumens per Lamp: N/A
Luminaire Lumens: 1838.0 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: S124RDR-H1020D950-X4F0-XX-UDD-WVL-B

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86																												
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74																												
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64																												
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44																												
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40																												
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36																												
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33																												
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8208	8208	8208
5°	8191	8094	8104
10°	8169	7855	7728
15°	8118	7559	7290
20°	7985	7226	6836
25°	7780	6800	6321
30°	7540	6360	5769
35°	7301	5899	5180
40°	7052	5377	4520
45°	6738	4829	3779
50°	6362	4261	3196
55°	5920	3615	2959
60°	5248	3067	2797
65°	4472	2830	2647
70°	3497	2623	2510
75°	2386	2422	2422
80°	2053	2276	2331
85°	1769	2213	2431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6738 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	4.8
10°-20°	240.8	13.1
20°-30°	334.4	18.2
30°-40°	358.4	19.5
40°-50°	317.5	17.3
50°-60°	239.3	13.0
60°-70°	155.0	8.4
70°-80°	79.5	4.3
80°-90°	24.4	1.3
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°	663.9	36.1
0°-40°	1022.3	55.6
0°-60°	1579.1	85.9
0°-90°	1838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	953	953	953	953	953	
5°	948	949	936	938	938	90
15°	911	890	848	827	818	256
25°	819	775	716	678	665	377
35°	694	632	561	511	493	434
45°	553	482	396	335	310	427
55°	394	328	241	203	197	350
65°	220	177	139	131	130	218
75°	72	75	73	73	73	85
85°	18	19	22	25	25	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.2	953.2	953.2	953.2	953.2
2.5°	951.0	954.3	945.4	952.1	954.3
5°	947.6	948.7	936.4	937.5	937.5
7.5°	942.0	939.8	919.6	914.0	912.9
10°	934.2	927.4	898.3	887.1	883.8
12.5°	924.1	911.8	874.8	859.1	852.4
15°	910.6	890.5	847.9	826.6	817.7
17.5°	890.5	864.7	819.9	793.0	782.9
20°	871.4	836.7	788.5	754.9	746.0
22.5°	844.6	807.6	752.7	716.9	705.7
25°	818.8	775.1	715.7	677.7	665.3
27.5°	790.8	741.5	677.7	637.3	621.7
30°	758.3	705.7	639.6	597.0	580.2
32.5°	726.9	670.9	600.4	553.3	535.4
35°	694.5	631.7	561.2	510.8	492.8
37.5°	660.9	594.8	517.5	468.2	444.7
40°	627.3	557.8	478.3	422.3	402.1
42.5°	592.5	519.7	438.0	379.7	354.0
45°	553.3	481.6	396.5	334.9	310.3
47.5°	515.2	444.7	358.4	291.2	268.8
50°	474.9	405.5	318.1	253.1	238.6
52.5°	434.6	365.2	278.9	224.0	217.3
55°	394.3	328.2	240.8	202.7	197.1
57.5°	349.5	290.1	207.2	183.7	179.2
60°	304.7	248.7	178.1	165.8	162.4
62.5°	261.0	212.8	157.9	147.9	145.6
65°	219.5	177.0	138.9	131.1	129.9
67.5°	179.2	145.6	121.0	116.5	114.3
70°	138.9	116.5	104.2	101.9	99.7
72.5°	103.0	94.1	88.5	87.4	86.2
75°	71.7	75.0	72.8	72.8	72.8
77.5°	57.1	58.2	59.4	60.5	59.4
80°	41.4	44.8	45.9	48.2	47.0
82.5°	29.1	31.4	34.7	35.8	37.0
85°	17.9	19.0	22.4	24.6	24.6
87.5°	7.8	9.0	11.2	13.4	14.6
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	17.75	19.25	18.12	19.57	19.88	14.32	15.82	14.68	16.13	16.44
	3H	18.96	20.30	19.34	20.63	20.99	16.01	17.36	16.39	17.68	18.05
	4H	19.26	20.52	19.66	20.87	21.25	16.69	17.95	17.09	18.30	18.68
	6H	19.47	20.63	19.88	21.00	21.39	17.24	18.40	17.65	18.77	19.16
	8H	19.52	20.63	19.95	21.02	21.42	17.46	18.56	17.88	18.95	19.36
	12H	19.56	20.62	19.99	21.00	21.43	17.63	18.69	18.06	19.07	19.50
4H	2H	17.89	19.15	18.29	19.50	19.88	14.98	16.24	15.38	16.59	16.97
	3H	19.30	20.34	19.71	20.74	21.14	16.89	17.93	17.30	18.33	18.73
	4H	19.72	20.66	20.16	21.08	21.52	17.69	18.63	18.12	19.05	19.48
	6H	20.05	20.86	20.50	21.31	21.77	18.38	19.20	18.84	19.64	20.10
	8H	20.15	20.91	20.61	21.35	21.82	18.65	19.42	19.12	19.86	20.33
	12H	20.22	20.90	20.70	21.38	21.85	18.88	19.56	19.36	20.04	20.51
8H	4H	19.85	20.61	20.31	21.06	21.53	18.01	18.77	18.47	19.21	19.68
	6H	20.27	20.90	20.77	21.39	21.87	18.84	19.47	19.33	19.96	20.44
	8H	20.43	21.00	20.94	21.51	21.99	19.20	19.77	19.72	20.28	20.77
	12H	20.56	21.06	21.07	21.55	22.12	19.53	20.04	20.04	20.53	21.09
12H	4H	19.86	20.54	20.34	21.02	21.49	18.03	18.72	18.52	19.20	19.67
	6H	20.30	20.86	20.81	21.37	21.86	18.90	19.46	19.41	19.97	20.46
	8H	20.50	21.01	21.01	21.50	22.06	19.33	19.83	19.84	20.32	20.89