

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: P1060677

Luminaire Tested: S124RDR-H1020D930-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D930-X4F0-XX-UDD-WVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

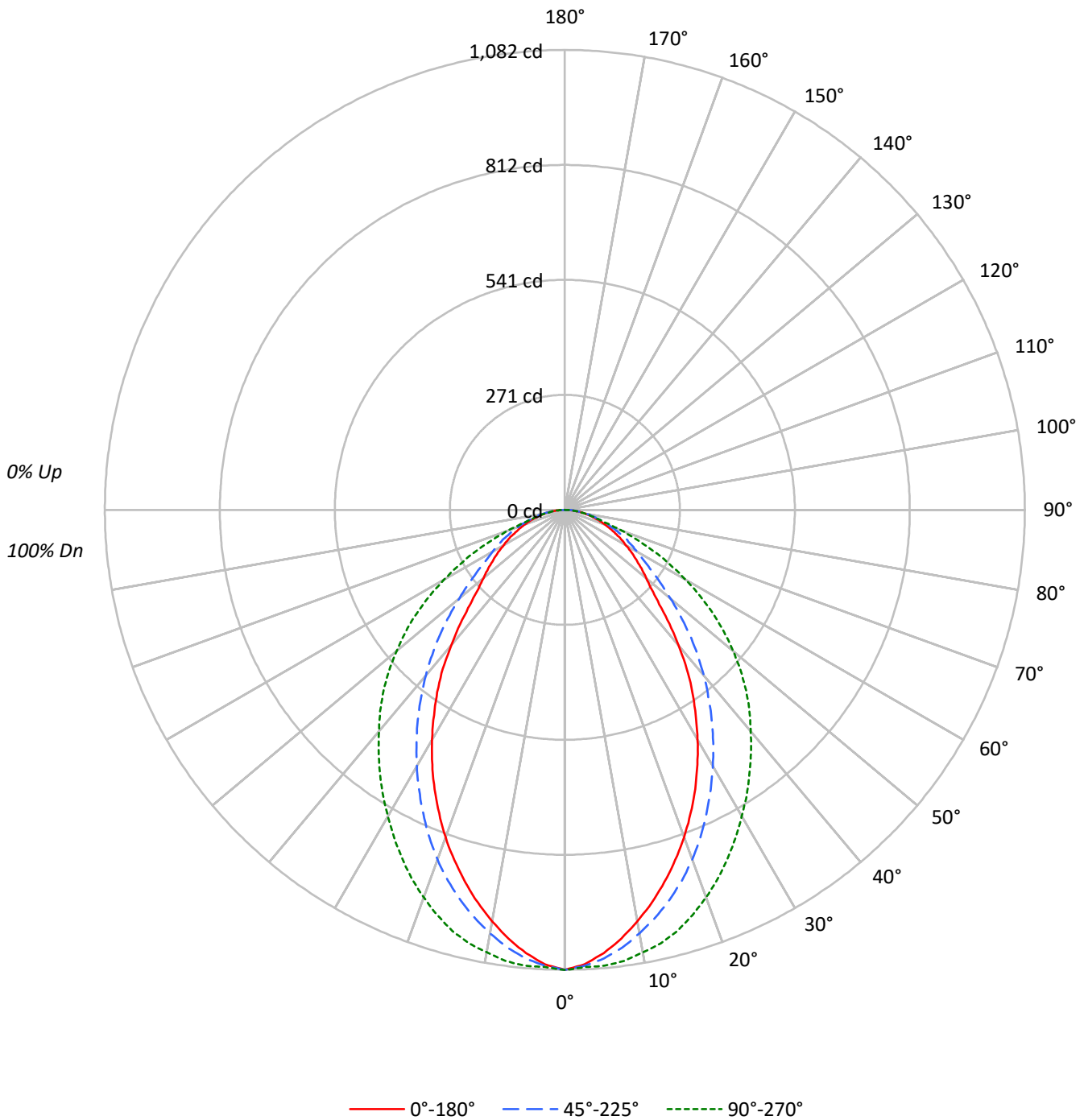
Lumens per Lamp: N/A
Luminaire Lumens: 1986.2 lumens
Efficiency: N/A
Efficacy: 63.7 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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				
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65				
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57				
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9321	9321	9321
5°	9050	9157	9307
10°	8594	8845	9247
15°	8079	8471	9138
20°	7514	8023	8893
25°	6889	7491	8601
30°	6211	6924	8277
35°	5498	6334	7965
40°	4673	5717	7645
45°	3826	5051	7349
50°	3349	4338	6917
55°	3078	3740	6400
60°	2854	3365	5642
65°	2673	3162	4723
70°	2508	2893	3545
75°	2359	2645	2582
80°	2187	2425	2187
85°	1986	2361	1897

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7349 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	5.0
10°-20°	269.2	13.6
20°-30°	367.9	18.5
30°-40°	386.7	19.5
40°-50°	335.5	16.9
50°-60°	253.1	12.7
60°-70°	164.1	8.3
70°-80°	84.2	4.2
80°-90°	25.5	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°	737.1	37.1
0°-40°	1123.8	56.6
0°-60°	1712.4	86.2
0°-90°	1986.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1986.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1047	1061	1059	1068	1077	98
15°	906	928	950	993	1025	254
25°	725	751	788	849	905	332
35°	523	552	602	683	758	325
45°	314	344	415	518	604	247
55°	205	211	249	354	426	184
65°	131	134	155	188	232	131
75°	71	80	80	80	78	75
85°	20	25	24	23	19	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1082.4	1082.4	1082.4	1082.4	1082.4
2.5°	1070.0	1083.4	1073.8	1075.7	1076.7
5°	1047.0	1061.4	1059.4	1068.1	1076.7
7.5°	1017.3	1034.5	1038.4	1055.6	1070.0
10°	982.8	1002.0	1011.5	1039.3	1057.5
12.5°	946.4	965.6	982.8	1018.2	1044.1
15°	906.2	928.2	950.2	993.3	1025.0
17.5°	864.0	887.0	914.8	961.7	999.1
20°	820.0	843.0	875.5	926.3	970.4
22.5°	773.0	798.9	833.4	888.0	939.7
25°	725.1	751.0	788.4	848.7	905.2
27.5°	675.3	702.1	742.4	809.4	869.8
30°	624.6	653.3	696.4	767.3	832.4
32.5°	572.8	603.5	649.5	725.1	796.0
35°	523.0	551.8	602.5	683.0	757.7
37.5°	471.3	500.0	554.6	641.8	719.4
40°	415.7	447.3	508.6	598.7	680.1
42.5°	364.0	395.6	461.7	557.5	642.8
45°	314.2	343.9	414.8	518.2	603.5
47.5°	275.9	296.9	367.8	479.9	561.3
50°	250.0	259.6	323.8	437.8	516.3
52.5°	227.0	234.7	283.5	395.6	472.2
55°	205.0	210.7	249.1	353.5	426.3
57.5°	185.8	188.7	218.4	311.3	376.5
60°	165.7	169.5	195.4	268.2	327.6
62.5°	149.4	151.3	175.3	227.0	278.7
65°	131.2	134.1	155.2	187.7	231.8
67.5°	114.9	119.7	134.1	153.3	183.0
70°	99.6	106.3	114.9	124.5	140.8
72.5°	85.3	92.9	97.7	101.5	98.7
75°	70.9	79.5	79.5	80.5	77.6
77.5°	57.5	65.1	64.2	63.2	59.4
80°	44.1	50.8	48.9	47.9	44.1
82.5°	32.6	37.4	35.4	34.5	29.7
85°	20.1	24.9	23.9	23.0	19.2
87.5°	9.6	14.4	13.4	12.5	8.6
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	14.26	15.74	14.62	16.06	16.37	18.00	19.48	18.36	19.80	20.11
	3H	15.93	17.26	16.30	17.59	17.95	19.12	20.46	19.50	20.78	21.15
	4H	16.59	17.84	16.99	18.19	18.57	19.42	20.67	19.82	21.02	21.40
	6H	17.10	18.25	17.51	18.62	19.01	19.62	20.77	20.03	21.14	21.53
	8H	17.28	18.37	17.70	18.76	19.16	19.67	20.77	20.10	21.16	21.56
	12H	17.40	18.45	17.83	18.83	19.26	19.71	20.76	20.14	21.14	21.57
4H	2H	15.05	16.30	15.45	16.65	17.03	18.16	19.41	18.56	19.76	20.14
	3H	16.92	17.96	17.33	18.36	18.76	19.49	20.53	19.90	20.93	21.33
	4H	17.73	18.66	18.16	19.07	19.51	19.91	20.84	20.34	21.26	21.70
	6H	18.37	19.18	18.83	19.62	20.08	20.23	21.04	20.69	21.48	21.94
	8H	18.59	19.35	19.06	19.79	20.26	20.33	21.08	20.79	21.53	22.00
	12H	18.76	19.43	19.24	19.91	20.38	20.40	21.07	20.88	21.55	22.02
8H	4H	18.07	18.83	18.54	19.28	19.74	20.04	20.80	20.51	21.24	21.71
	6H	18.86	19.49	19.36	19.98	20.46	20.46	21.09	20.96	21.58	22.06
	8H	19.18	19.74	19.70	20.26	20.74	20.62	21.18	21.13	21.69	22.18
	12H	19.45	19.94	19.96	20.44	21.00	20.76	21.25	21.27	21.75	22.31
12H	4H	18.10	18.78	18.59	19.26	19.73	20.05	20.72	20.53	21.20	21.67
	6H	18.93	19.49	19.44	20.00	20.49	20.48	21.05	21.00	21.56	22.04
	8H	19.31	19.81	19.82	20.30	20.87	20.69	21.19	21.20	21.68	22.25