

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: P1060631

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060631
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D830-X4F0-XX-UDD-WVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

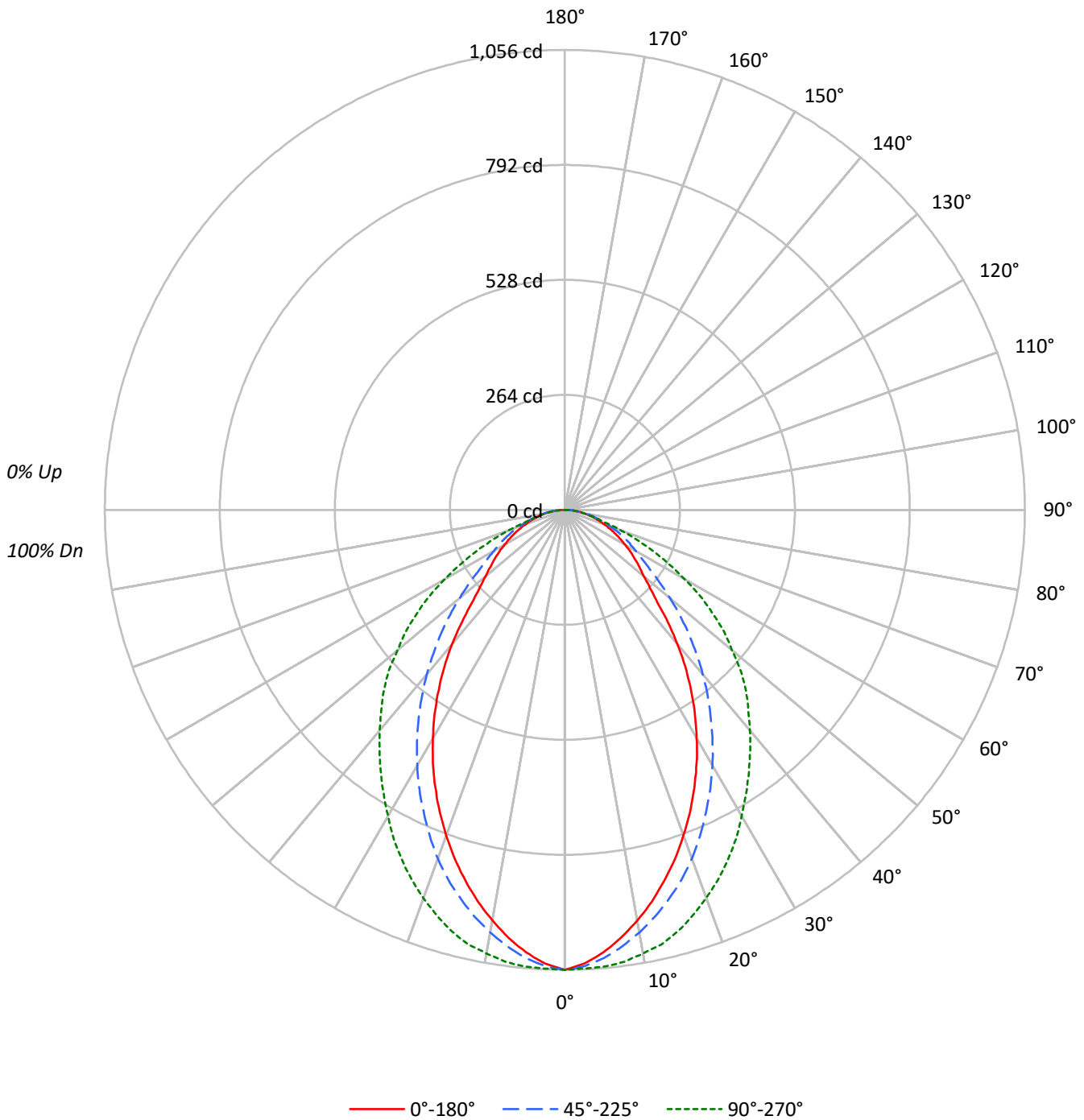
Lumens per Lamp: N/A
Luminaire Lumens: 1923.1 lumens
Efficiency: N/A
Efficacy: 61.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50														
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9096	9096	9096
5°	8815	8930	9102
10°	8375	8617	9043
15°	7858	8243	8934
20°	7295	7813	8696
25°	6680	7280	8416
30°	6023	6738	8070
35°	5308	6145	7740
40°	4518	5538	7430
45°	3668	4894	7161
50°	3175	4213	6705
55°	2943	3575	6217
60°	2745	3222	5454
65°	2571	3024	4536
70°	2397	2787	3429
75°	2286	2578	2469
80°	2142	2360	2088
85°	1966	2184	1640

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	5.1
10°-20°	262.1	13.6
20°-30°	357.9	18.6
30°-40°	375.0	19.5
40°-50°	324.6	16.9
50°-60°	243.9	12.7
60°-70°	157.3	8.2
70°-80°	80.6	4.2
80°-90°	24.1	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°	717.6	37.3
0°-40°	1092.6	56.8
0°-60°	1661.1	86.4
0°-90°	1923.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1923.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1020	1035	1033	1041	1053	95
15°	881	904	925	967	1002	247
25°	703	730	766	826	886	323
35°	505	534	585	662	736	315
45°	301	332	402	500	588	237
55°	196	203	238	340	414	176
65°	126	128	148	179	223	125
75°	69	76	78	76	74	73
85°	20	23	22	21	17	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1056.3	1056.3	1056.3	1056.3	1056.3
2.5°	1043.0	1056.3	1048.6	1050.8	1054.1
5°	1019.8	1035.3	1033.1	1040.8	1053.0
7.5°	991.0	1007.6	1010.9	1028.6	1046.4
10°	957.8	976.6	985.5	1012.0	1034.2
12.5°	921.2	941.2	956.7	989.9	1022.0
15°	881.4	903.5	924.6	966.6	1002.1
17.5°	840.4	862.6	890.2	936.7	976.6
20°	796.1	820.5	852.6	901.3	948.9
22.5°	750.7	776.2	810.5	863.7	919.0
25°	703.1	729.7	766.2	826.0	885.8
27.5°	655.5	682.1	723.0	786.2	851.5
30°	605.7	633.4	677.6	746.3	811.6
32.5°	555.8	585.7	631.1	704.2	774.0
35°	504.9	533.7	584.6	662.1	736.3
37.5°	454.0	483.9	538.1	621.2	698.7
40°	401.9	432.9	492.7	580.2	661.0
42.5°	349.9	383.1	446.2	538.1	623.4
45°	301.2	332.2	401.9	500.5	588.0
47.5°	264.6	285.7	357.6	463.9	548.1
50°	237.0	248.0	314.5	424.1	500.5
52.5°	215.9	223.7	274.6	380.9	461.7
55°	196.0	202.6	238.1	339.9	414.1
57.5°	178.3	181.6	210.4	300.1	368.7
60°	159.4	162.8	187.1	256.9	316.7
62.5°	142.8	145.1	168.3	215.9	269.1
65°	126.2	128.4	148.4	179.4	222.6
67.5°	110.7	114.0	129.5	146.2	177.2
70°	95.2	101.9	110.7	118.5	136.2
72.5°	81.9	88.6	93.0	95.2	96.3
75°	68.7	76.4	77.5	76.4	74.2
77.5°	55.4	62.0	62.0	59.8	57.6
80°	43.2	48.7	47.6	45.4	42.1
82.5°	32.1	35.4	34.3	32.1	28.8
85°	19.9	23.3	22.1	21.0	16.6
87.5°	10.0	13.3	12.2	11.1	6.6
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	14.10	15.59	14.47	15.90	16.22	17.88	19.36	18.24	19.67	19.99
	3H	15.76	17.09	16.14	17.42	17.78	18.99	20.32	19.37	20.65	21.01
	4H	16.43	17.67	16.83	18.02	18.40	19.28	20.53	19.68	20.88	21.26
	6H	16.94	18.09	17.35	18.46	18.85	19.48	20.63	19.89	21.00	21.39
	8H	17.12	18.22	17.55	18.61	19.01	19.53	20.63	19.96	21.02	21.42
	12H	17.25	18.30	17.68	18.68	19.11	19.56	20.61	19.99	20.99	21.42
4H	2H	14.89	16.13	15.29	16.48	16.86	18.04	19.28	18.44	19.63	20.01
	3H	16.75	17.78	17.16	18.18	18.58	19.35	20.38	19.76	20.78	21.18
	4H	17.56	18.49	17.99	18.90	19.34	19.76	20.68	20.19	21.10	21.54
	6H	18.20	19.01	18.66	19.45	19.91	20.07	20.88	20.53	21.32	21.78
	8H	18.43	19.19	18.90	19.63	20.10	20.16	20.92	20.63	21.36	21.83
	12H	18.60	19.28	19.09	19.75	20.23	20.23	20.90	20.71	21.38	21.85
8H	4H	17.91	18.66	18.37	19.10	19.57	19.89	20.64	20.35	21.09	21.56
	6H	18.70	19.32	19.20	19.81	20.29	20.30	20.92	20.80	21.42	21.89
	8H	19.02	19.58	19.53	20.09	20.58	20.45	21.01	20.97	21.52	22.01
	12H	19.28	19.78	19.79	20.27	20.84	20.58	21.07	21.09	21.56	22.13
12H	4H	17.94	18.61	18.42	19.09	19.56	19.89	20.57	20.38	21.05	21.52
	6H	18.76	19.32	19.28	19.83	20.32	20.32	20.88	20.84	21.39	21.88
	8H	19.15	19.64	19.66	20.13	20.70	20.52	21.02	21.04	21.51	22.08