

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: P1060629

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060629
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D830-X4F0-XX-UDD-SVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

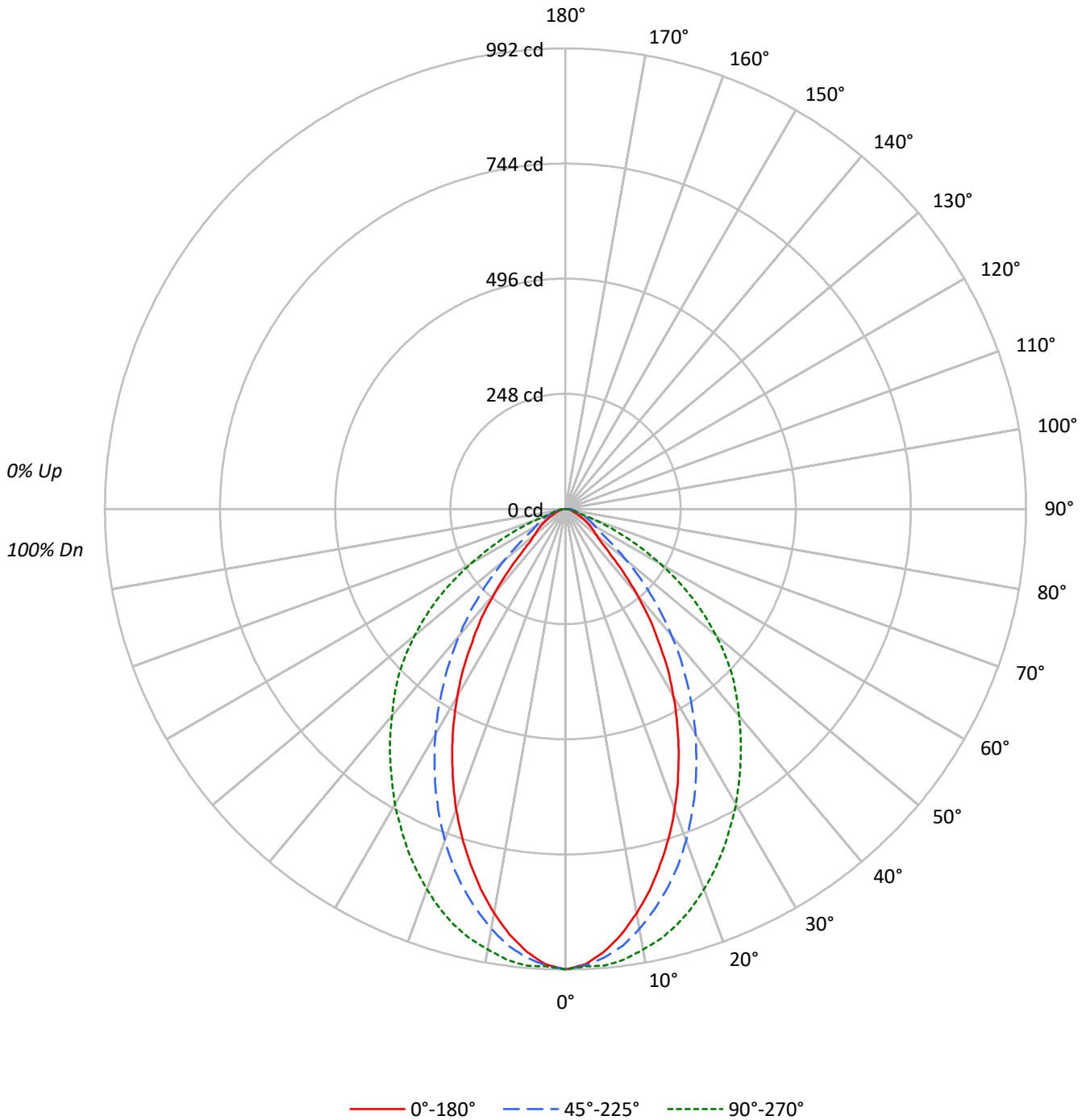
Lumens per Lamp: N/A
Luminaire Lumens: 1403.3 lumens
Efficiency: N/A
Efficacy: 45.0 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79				79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63				63
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57				57
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51				51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47				47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43				43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39				39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36				36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8538	8538	8538
5°	8274	8380	8533
10°	7731	8030	8427
15°	7052	7546	8267
20°	6305	6964	7990
25°	5484	6295	7663
30°	4627	5574	7303
35°	3680	4798	6918
40°	2678	3997	6538
45°	1618	3157	6193
50°	1157	2285	5669
55°	982	1546	5007
60°	801	1259	4046
65°	632	1129	2912
70°	529	949	1533
75°	479	885	775
80°	496	878	769
85°	652	1314	879

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6193 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	6.5
10°-20°	239.2	17.0
20°-30°	310.2	22.1
30°-40°	298.6	21.3
40°-50°	222.2	15.8
50°-60°	136.6	9.7
60°-70°	67.1	4.8
70°-80°	26.2	1.9
80°-90°	11.9	0.9
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°	640.7	45.7
0°-40°	939.3	66.9
0°-60°	1298.1	92.5
0°-90°	1403.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1403.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	957	972	969	978	987	89
15°	791	816	846	897	927	221
25°	577	608	662	746	806	264
35°	350	383	456	570	658	219
45°	133	165	259	400	508	110
55°	65	68	103	235	334	59
65°	31	33	55	89	143	32
75°	14	26	27	24	23	16
85°	7	12	13	13	9	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	991.5	991.5	991.5	991.5	991.5
2.5°	981.5	992.6	983.8	984.9	986.0
5°	957.2	971.6	969.4	978.2	987.1
7.5°	923.9	940.6	948.3	966.0	978.2
10°	884.1	902.9	918.4	947.2	963.8
12.5°	839.7	861.9	884.1	922.8	948.3
15°	791.0	816.5	846.4	897.3	927.3
17.5°	741.1	766.6	805.4	864.1	901.8
20°	688.0	715.7	760.0	825.3	871.9
22.5°	632.6	662.5	711.2	785.5	840.8
25°	577.2	608.2	662.5	745.6	806.5
27.5°	521.8	551.7	610.4	703.5	769.9
30°	465.3	496.3	560.6	658.1	734.5
32.5°	411.0	439.8	508.5	614.8	695.7
35°	350.1	383.3	456.4	570.5	658.1
37.5°	298.0	327.9	406.6	526.2	620.4
40°	238.2	271.4	355.6	483.0	581.6
42.5°	182.8	216.0	306.9	439.8	545.1
45°	132.9	165.1	259.2	399.9	508.5
47.5°	100.8	119.6	212.7	361.2	467.5
50°	86.4	92.0	170.6	319.1	423.2
52.5°	76.4	78.7	132.9	277.0	378.9
55°	65.4	67.6	103.0	234.9	333.5
57.5°	55.4	56.5	83.1	195.0	284.7
60°	46.5	47.6	73.1	156.2	234.9
62.5°	38.8	39.9	65.4	120.8	187.2
65°	31.0	33.2	55.4	88.6	142.9
67.5°	25.5	29.9	46.5	62.0	99.7
70°	21.0	28.8	37.7	43.2	60.9
72.5°	17.7	26.6	32.1	31.0	29.9
75°	14.4	25.5	26.6	24.4	23.3
77.5°	12.2	22.2	22.2	19.9	18.8
80°	10.0	17.7	17.7	17.7	15.5
82.5°	8.9	14.4	15.5	15.5	12.2
85°	6.6	12.2	13.3	13.3	8.9
87.5°	4.4	11.1	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	7.24	8.58	7.60	8.89	9.20	16.40	17.75	16.77	18.06	18.37
	3H	8.35	9.54	8.73	9.87	10.23	16.91	18.10	17.29	18.43	18.80
	4H	8.86	9.97	9.27	10.32	10.71	16.93	18.04	17.33	18.39	18.77
	6H	9.30	10.32	9.71	10.69	11.08	16.94	17.96	17.36	18.33	18.73
	8H	9.49	10.46	9.92	10.85	11.25	16.94	17.91	17.37	18.30	18.71
	12H	9.67	10.60	10.10	10.98	11.41	16.95	17.87	17.38	18.25	18.69
4H	2H	8.38	9.49	8.78	9.84	10.22	16.30	17.41	16.70	17.76	18.14
	3H	9.72	10.63	10.13	11.03	11.44	16.88	17.79	17.30	18.20	18.60
	4H	10.46	11.27	10.89	11.69	12.13	16.94	17.76	17.38	18.18	18.62
	6H	11.07	11.77	11.53	12.22	12.68	17.02	17.72	17.48	18.17	18.63
	8H	11.31	11.97	11.78	12.41	12.88	17.05	17.71	17.52	18.15	18.62
	12H	11.55	12.13	12.03	12.61	13.08	17.09	17.67	17.58	18.15	18.63
8H	4H	10.92	11.58	11.39	12.03	12.50	16.90	17.56	17.37	18.01	18.48
	6H	11.77	12.31	12.28	12.81	13.29	17.03	17.57	17.53	18.06	18.54
	8H	12.18	12.66	12.70	13.18	13.67	17.11	17.60	17.63	18.11	18.60
	12H	12.60	13.03	13.12	13.53	14.10	17.23	17.66	17.75	18.16	18.73
12H	4H	10.98	11.56	11.46	12.04	12.51	16.87	17.46	17.36	17.94	18.41
	6H	11.91	12.39	12.43	12.90	13.40	17.01	17.49	17.53	18.01	18.50
	8H	12.43	12.86	12.94	13.35	13.92	17.14	17.57	17.66	18.07	18.64