

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: P1060676

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060676
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-H1020D930-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, 90 CRI LEDS
Ballast/Driver: -

Summary

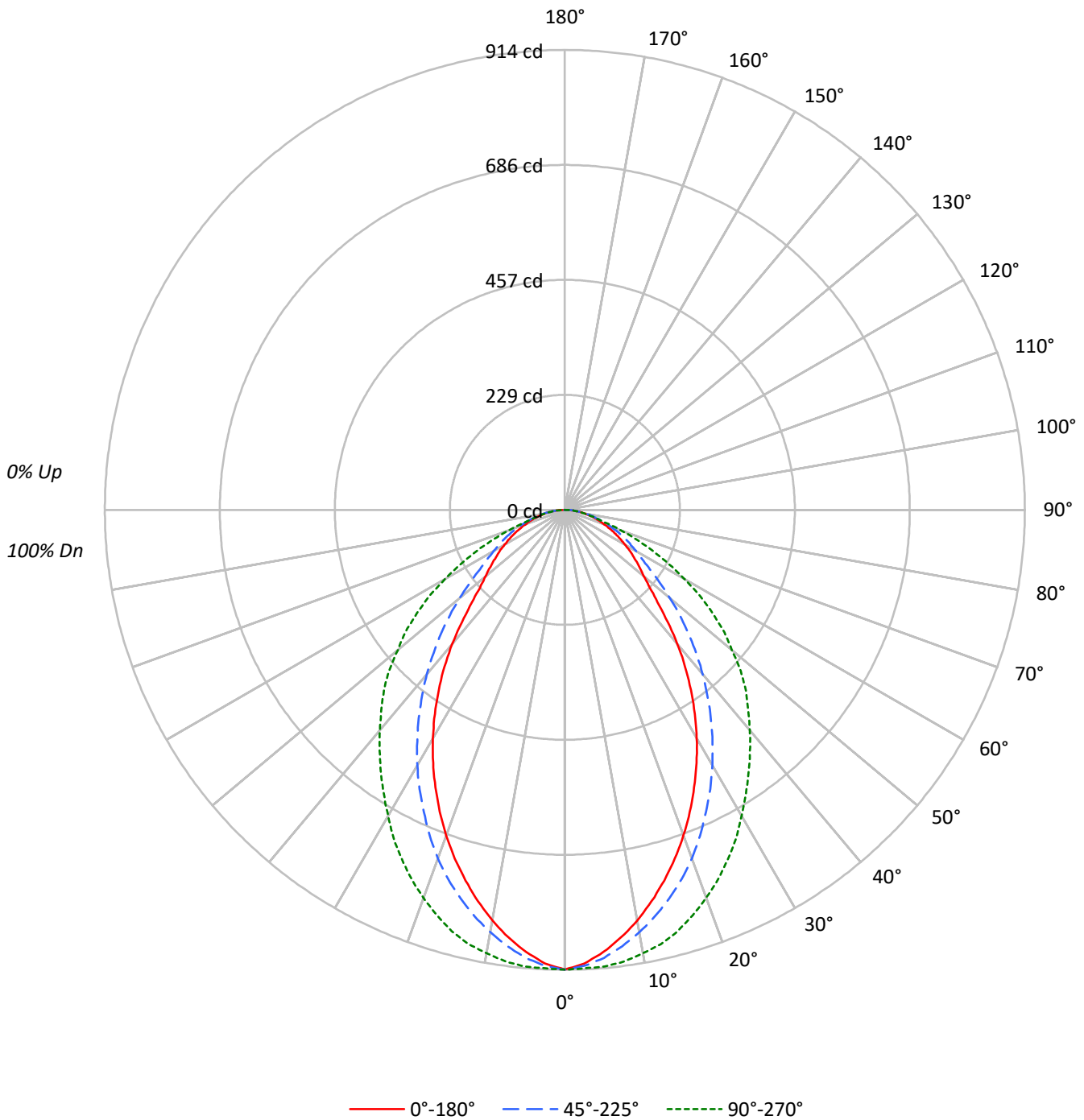
Lumens per Lamp: N/A
Luminaire Lumens: 1663.5 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7868	7868	7868
5°	7625	7724	7874
10°	7244	7453	7822
15°	6797	7129	7727
20°	6310	6758	7522
25°	5779	6297	7280
30°	5209	5829	6981
35°	4591	5316	6695
40°	3909	4791	6428
45°	3172	4234	6194
50°	2746	3644	5799
55°	2545	3091	5378
60°	2375	2788	4717
65°	2225	2614	3922
70°	2075	2412	2966
75°	1976	2229	2136
80°	1855	2043	1805
85°	1699	1897	1423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6194 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	5.1
10°-20°	226.7	13.6
20°-30°	309.6	18.6
30°-40°	324.4	19.5
40°-50°	280.8	16.9
50°-60°	211.0	12.7
60°-70°	136.1	8.2
70°-80°	69.8	4.2
80°-90°	20.8	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°	620.7	37.3
0°-40°	945.1	56.8
0°-60°	1436.9	86.4
0°-90°	1663.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1663.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	882	896	894	900	911	83
15°	762	782	800	836	867	214
25°	608	631	663	714	766	279
35°	437	462	506	573	637	272
45°	260	287	348	433	509	205
55°	170	175	206	294	358	152
65°	109	111	128	155	192	109
75°	59	66	67	66	64	63
85°	17	20	19	18	14	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	913.7	913.7	913.7	913.7	913.7
2.5°	902.2	913.7	907.0	908.9	911.8
5°	882.1	895.5	893.6	900.3	910.9
7.5°	857.2	871.6	874.5	889.8	905.1
10°	828.5	844.8	852.4	875.4	894.6
12.5°	796.9	814.1	827.5	856.3	884.0
15°	762.4	781.6	799.7	836.1	866.8
17.5°	727.0	746.1	770.1	810.3	844.8
20°	688.6	709.7	737.5	779.6	820.8
22.5°	649.4	671.4	701.1	747.1	795.0
25°	608.2	631.2	662.8	714.5	766.2
27.5°	567.0	590.0	625.4	680.0	736.5
30°	523.9	547.9	586.2	645.5	702.1
32.5°	480.8	506.7	545.9	609.1	669.5
35°	436.7	461.7	505.7	572.8	636.9
37.5°	392.7	418.6	465.5	537.3	604.4
40°	347.7	374.5	426.2	501.9	571.8
42.5°	302.7	331.4	386.0	465.5	539.2
45°	260.5	287.3	347.7	432.9	508.6
47.5°	228.9	247.1	309.4	401.3	474.1
50°	205.0	214.5	272.0	366.8	432.9
52.5°	186.8	193.5	237.5	329.5	399.4
55°	169.5	175.3	205.9	294.0	358.2
57.5°	154.2	157.1	182.0	259.6	318.9
60°	137.9	140.8	161.9	222.2	273.9
62.5°	123.6	125.5	145.6	186.8	232.7
65°	109.2	111.1	128.3	155.2	192.5
67.5°	95.8	98.7	112.1	126.4	153.2
70°	82.4	88.1	95.8	102.5	117.8
72.5°	70.9	76.6	80.5	82.4	83.3
75°	59.4	66.1	67.0	66.1	64.2
77.5°	47.9	53.6	53.6	51.7	49.8
80°	37.4	42.1	41.2	39.3	36.4
82.5°	27.8	30.6	29.7	27.8	24.9
85°	17.2	20.1	19.2	18.2	14.4
87.5°	8.6	11.5	10.5	9.6	5.7
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	13.60	15.08	13.97	15.40	15.71	17.37	18.86	17.74	19.17	19.49
	3H	15.26	16.58	15.63	16.91	17.28	18.49	19.82	18.86	20.14	20.51
	4H	15.93	17.17	16.33	17.52	17.90	18.78	20.02	19.18	20.37	20.75
	6H	16.44	17.59	16.85	17.96	18.35	18.97	20.12	19.39	20.49	20.88
	8H	16.62	17.71	17.05	18.10	18.51	19.03	20.12	19.45	20.51	20.91
	12H	16.75	17.79	17.18	18.18	18.60	19.05	20.10	19.48	20.48	20.91
4H	2H	14.38	15.63	14.78	15.98	16.36	17.53	18.78	17.93	19.13	19.51
	3H	16.24	17.28	16.66	17.68	18.08	18.84	19.88	19.25	20.28	20.68
	4H	17.05	17.98	17.49	18.40	18.84	19.25	20.18	19.68	20.60	21.04
	6H	17.70	18.51	18.16	18.95	19.41	19.57	20.37	20.03	20.82	21.28
	8H	17.93	18.68	18.39	19.13	19.60	19.66	20.41	20.12	20.86	21.33
	12H	18.10	18.77	18.58	19.25	19.72	19.72	20.40	20.20	20.87	21.35
8H	4H	17.40	18.16	17.87	18.60	19.07	19.38	20.14	19.85	20.58	21.05
	6H	18.19	18.82	18.69	19.31	19.79	19.80	20.42	20.29	20.91	21.39
	8H	18.52	19.07	19.03	19.59	20.07	19.95	20.51	20.46	21.02	21.51
	12H	18.78	19.27	19.29	19.77	20.33	20.07	20.57	20.58	21.06	21.62
12H	4H	17.43	18.10	17.91	18.58	19.06	19.39	20.06	19.87	20.54	21.01
	6H	18.26	18.82	18.77	19.33	19.82	19.82	20.38	20.33	20.89	21.38
	8H	18.64	19.14	19.15	19.63	20.20	20.02	20.52	20.53	21.01	21.57