

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: P1060646

Luminaire Tested: S124RDR-H1020D840-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060646
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D840-X4F0-XX-UDD-SVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

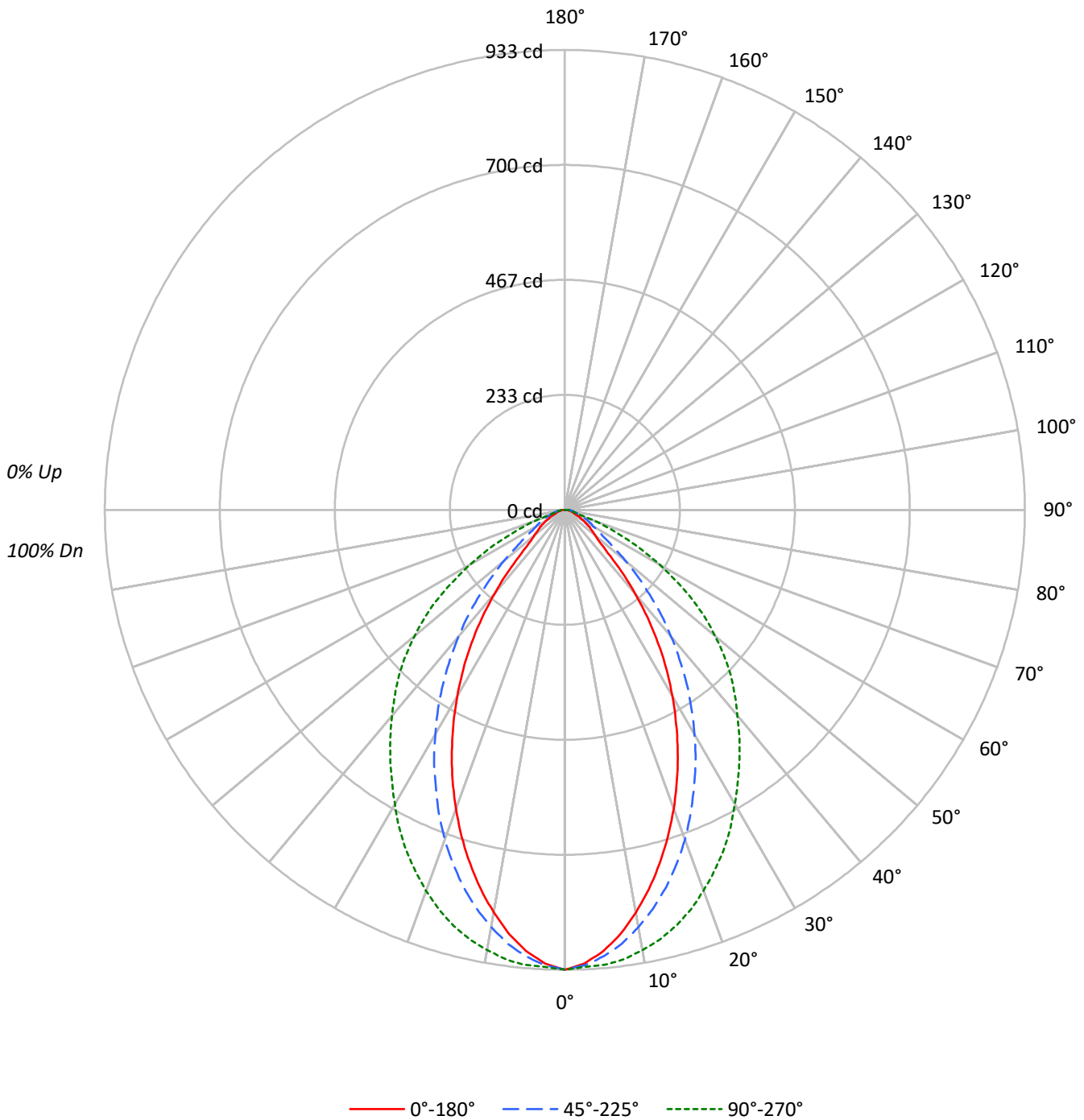
Lumens per Lamp: N/A
Luminaire Lumens: 1311.6 lumens
Efficiency: N/A
Efficacy: 42.0 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	105	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	67	75	70	66	73	68	65	63			63	
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	59	57			57	
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51			51	
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47			47	
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43			43	
9	65	54	46	42	64	53	46	42	52	46	41	51	45	41	50	45	41	39			39	
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	36			36	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8032	8032	8032
5°	7766	7857	8011
10°	7253	7513	7928
15°	6623	7067	7786
20°	5916	6525	7536
25°	5153	5886	7239
30°	4342	5227	6856
35°	3468	4529	6487
40°	2494	3762	6123
45°	1503	2963	5796
50°	1081	2146	5326
55°	908	1443	4722
60°	735	1145	3801
65°	581	1039	2732
70°	509	866	1465
75°	472	789	712
80°	471	823	650
85°	701	1176	820

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5796 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.6	6.5
10°-20°	224.4	17.1
20°-30°	291.1	22.2
30°-40°	279.8	21.3
40°-50°	207.6	15.8
50°-60°	127.2	9.7
60°-70°	61.8	4.7
70°-80°	23.5	1.8
80°-90°	10.6	0.8
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°	601.1	45.8
0°-40°	880.9	67.2
0°-60°	1215.7	92.7
0°-90°	1311.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1311.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	898	911	909	917	927	84
15°	743	764	793	840	873	207
25°	542	570	620	699	762	248
35°	330	360	431	533	617	204
45°	123	154	243	371	476	102
55°	60	63	96	217	314	54
65°	28	31	51	81	134	29
75°	14	22	24	21	21	15
85°	7	12	12	11	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.8	932.8	932.8	932.8	932.8
2.5°	920.9	931.6	924.5	926.8	928.0
5°	898.4	911.4	909.0	917.4	926.8
7.5°	867.5	882.9	887.7	904.3	919.7
10°	829.5	848.5	859.2	886.5	906.7
12.5°	788.0	808.2	828.3	865.1	892.4
15°	742.9	764.3	792.7	840.2	873.4
17.5°	695.4	719.2	753.6	810.5	849.7
20°	645.6	670.5	712.0	774.9	822.4
22.5°	594.6	620.7	666.9	737.0	792.7
25°	542.3	569.6	619.5	699.0	761.9
27.5°	488.9	517.4	574.4	658.6	727.5
30°	436.7	464.0	525.7	617.1	689.5
32.5°	383.3	411.8	478.3	574.4	652.7
35°	329.9	359.6	430.8	532.8	617.1
37.5°	275.3	307.4	382.1	492.5	581.5
40°	221.9	252.8	334.7	451.0	544.7
42.5°	169.7	202.9	289.6	409.4	510.3
45°	123.4	154.3	243.3	371.4	475.9
47.5°	92.6	111.6	200.6	335.8	437.9
50°	80.7	84.3	160.2	296.7	397.6
52.5°	70.0	72.4	124.6	254.0	357.2
55°	60.5	62.9	96.1	217.2	314.5
57.5°	51.0	53.4	77.1	181.6	265.8
60°	42.7	45.1	66.5	144.8	220.7
62.5°	35.6	36.8	59.3	110.4	176.8
65°	28.5	30.9	51.0	80.7	134.1
67.5°	23.7	26.1	41.5	55.8	93.8
70°	20.2	26.1	34.4	39.2	58.2
72.5°	16.6	23.7	28.5	27.3	27.3
75°	14.2	22.5	23.7	21.4	21.4
77.5°	11.9	20.2	19.0	17.8	16.6
80°	9.5	16.6	16.6	14.2	13.1
82.5°	8.3	13.1	13.1	13.1	10.7
85°	7.1	11.9	11.9	10.7	8.3
87.5°	4.7	9.5	10.7	9.5	5.9
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	7.05	8.39	7.42	8.70	9.02	16.15	17.49	16.52	17.80	18.12
	3H	8.10	9.28	8.47	9.61	9.98	16.65	17.84	17.03	18.17	18.54
	4H	8.61	9.71	9.01	10.07	10.45	16.67	17.77	17.07	18.13	18.51
	6H	9.06	10.08	9.47	10.45	10.84	16.67	17.68	17.08	18.05	18.45
	8H	9.25	10.21	9.68	10.61	11.01	16.66	17.63	17.09	18.02	18.42
	12H	9.46	10.39	9.90	10.77	11.20	16.66	17.58	17.10	17.97	18.40
4H	2H	8.14	9.25	8.55	9.60	9.98	16.04	17.15	16.44	17.50	17.88
	3H	9.41	10.32	9.83	10.72	11.13	16.62	17.52	17.03	17.93	18.33
	4H	10.12	10.93	10.55	11.35	11.79	16.67	17.48	17.10	17.90	18.34
	6H	10.75	11.45	11.21	11.90	12.36	16.72	17.42	17.18	17.86	18.33
	8H	11.00	11.65	11.46	12.10	12.57	16.74	17.39	17.21	17.84	18.31
	12H	11.27	11.85	11.76	12.33	12.81	16.77	17.35	17.26	17.83	18.30
8H	4H	10.55	11.20	11.01	11.65	12.12	16.62	17.27	17.08	17.72	18.19
	6H	11.42	11.96	11.93	12.46	12.94	16.71	17.24	17.21	17.74	18.22
	8H	11.83	12.31	12.35	12.83	13.32	16.77	17.25	17.29	17.77	18.26
	12H	12.31	12.74	12.83	13.23	13.80	16.87	17.30	17.38	17.79	18.36
12H	4H	10.59	11.17	11.07	11.65	12.12	16.59	17.17	17.07	17.65	18.12
	6H	11.54	12.02	12.06	12.53	13.02	16.69	17.17	17.21	17.68	18.18
	8H	12.06	12.48	12.57	12.98	13.55	16.79	17.22	17.31	17.71	18.29