

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: P1058519

Luminaire Tested: S122RDR-H865D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H865D830-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

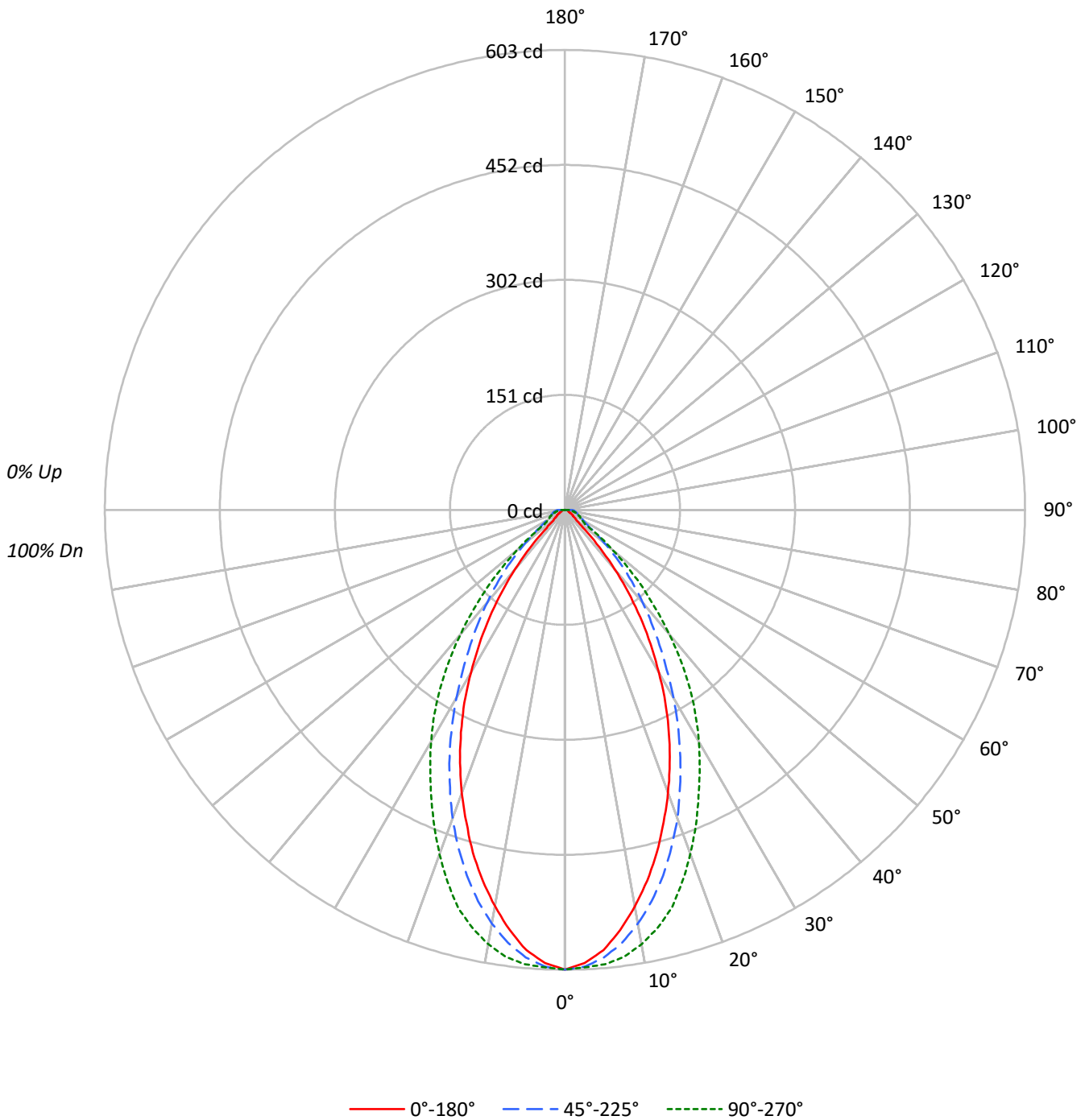
Lumens per Lamp: N/A
Luminaire Lumens: 649.7 lumens
Efficiency: N/A
Efficacy: 20.8 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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																				
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90																				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74																				
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67																				
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61																				
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57																				
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52																				
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48																				
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45																				
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11123	11123	11123
5°	10738	10908	11079
10°	9888	10320	10839
15°	8891	9485	10323
20°	7755	8458	9433
25°	6560	7289	8439
30°	5242	6053	7479
35°	3877	4863	6425
40°	2447	3811	5119
45°	966	2863	3766
50°	497	1923	2320
55°	409	1264	1039
60°	299	1022	937
65°	253	956	956
70°	248	998	933
75°	328	1155	991
80°	489	1477	1105
85°	741	2435	1461

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 4865 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	8.5
10°-20°	139.3	21.4
20°-30°	165.5	25.5
30°-40°	137.7	21.2
40°-50°	76.9	11.8
50°-60°	31.1	4.8
60°-70°	19.9	3.1
70°-80°	14.9	2.3
80°-90°	9.5	1.5
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°	359.9	55.4
0°-40°	497.5	76.6
0°-60°	605.5	93.2
0°-90°	649.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	649.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	580	590	589	594	598	54
15°	465	479	496	522	540	129
25°	322	335	358	386	414	147
35°	172	188	216	252	285	107
45°	37	62	110	128	144	35
55°	13	27	39	38	32	11
65°	6	23	22	21	22	6
75°	5	16	16	15	14	5
85°	4	10	12	10	7	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	602.8	602.8	602.8	602.8	602.8
2.5°	594.7	603.9	599.3	599.3	600.5
5°	579.7	590.1	588.9	593.5	598.1
7.5°	555.4	567.0	572.7	583.1	591.2
10°	527.7	540.4	550.8	567.0	578.5
12.5°	497.7	510.4	525.4	546.2	561.2
15°	465.4	479.2	496.5	521.9	540.4
17.5°	429.6	444.6	464.2	491.9	511.5
20°	394.9	409.9	430.7	458.4	480.4
22.5°	359.1	371.8	393.8	421.5	448.0
25°	322.2	334.9	358.0	385.7	414.5
27.5°	285.2	297.9	321.0	349.9	382.2
30°	246.0	259.8	284.1	316.4	351.0
32.5°	209.0	222.9	248.3	284.1	318.7
35°	172.1	188.2	215.9	251.7	285.2
37.5°	136.3	154.7	185.9	219.4	249.4
40°	101.6	121.2	158.2	187.1	212.5
42.5°	67.0	90.1	132.8	157.0	176.7
45°	37.0	62.4	109.7	128.2	144.3
47.5°	20.8	40.4	86.6	101.6	110.9
50°	17.3	30.0	67.0	77.4	80.8
52.5°	13.9	27.7	50.8	56.6	54.3
55°	12.7	26.6	39.3	38.1	32.3
57.5°	10.4	26.6	31.2	27.7	27.7
60°	8.1	25.4	27.7	24.2	25.4
62.5°	6.9	24.2	25.4	23.1	23.1
65°	5.8	23.1	21.9	20.8	21.9
67.5°	4.6	20.8	20.8	19.6	19.6
70°	4.6	19.6	18.5	17.3	17.3
72.5°	4.6	17.3	17.3	16.2	16.2
75°	4.6	16.2	16.2	15.0	13.9
77.5°	4.6	13.9	15.0	13.9	12.7
80°	4.6	12.7	13.9	12.7	10.4
82.5°	4.6	11.5	12.7	11.5	9.2
85°	3.5	10.4	11.5	10.4	6.9
87.5°	3.5	10.4	11.5	9.2	5.8
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	6.74	7.96	7.11	8.28	8.59	7.81	9.03	8.17	9.34	9.65
	3H	8.07	9.16	8.45	9.49	9.85	9.83	10.92	10.21	11.25	11.61
	4H	8.64	9.65	9.05	10.01	10.39	10.79	11.80	11.20	12.16	12.54
	6H	9.21	10.14	9.62	10.51	10.90	11.74	12.67	12.16	13.04	13.44
	8H	9.53	10.41	9.96	10.80	11.21	12.19	13.07	12.62	13.46	13.87
	12H	9.84	10.68	10.27	11.06	11.50	12.61	13.45	13.04	13.83	14.26
4H	2H	7.70	8.71	8.11	9.06	9.45	8.48	9.49	8.89	9.84	10.23
	3H	9.73	10.56	10.14	10.96	11.37	10.76	11.60	11.18	12.00	12.41
	4H	10.81	11.56	11.24	11.98	12.42	11.92	12.66	12.35	13.08	13.53
	6H	11.68	12.33	12.14	12.77	13.24	13.09	13.74	13.55	14.18	14.65
	8H	12.09	12.69	12.56	13.14	13.61	13.65	14.25	14.12	14.70	15.17
	12H	12.47	13.00	12.96	13.49	13.96	14.19	14.72	14.68	15.21	15.68
8H	4H	11.58	12.19	12.05	12.63	13.11	12.47	13.07	12.94	13.52	13.99
	6H	12.92	13.42	13.42	13.91	14.40	13.93	14.42	14.43	14.92	15.40
	8H	13.63	14.08	14.16	14.59	15.09	14.68	15.13	15.21	15.65	16.14
	12H	14.32	14.72	14.84	15.21	15.79	15.47	15.86	15.99	16.36	16.93
12H	4H	11.74	12.27	12.22	12.76	13.23	12.58	13.11	13.06	13.59	14.07
	6H	13.24	13.69	13.77	14.20	14.70	14.15	14.60	14.68	15.11	15.61
	8H	14.14	14.53	14.66	15.03	15.60	15.05	15.45	15.57	15.94	16.52