

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055386

Luminaire Tested: S122R3DR-H865D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055386
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H865D830-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

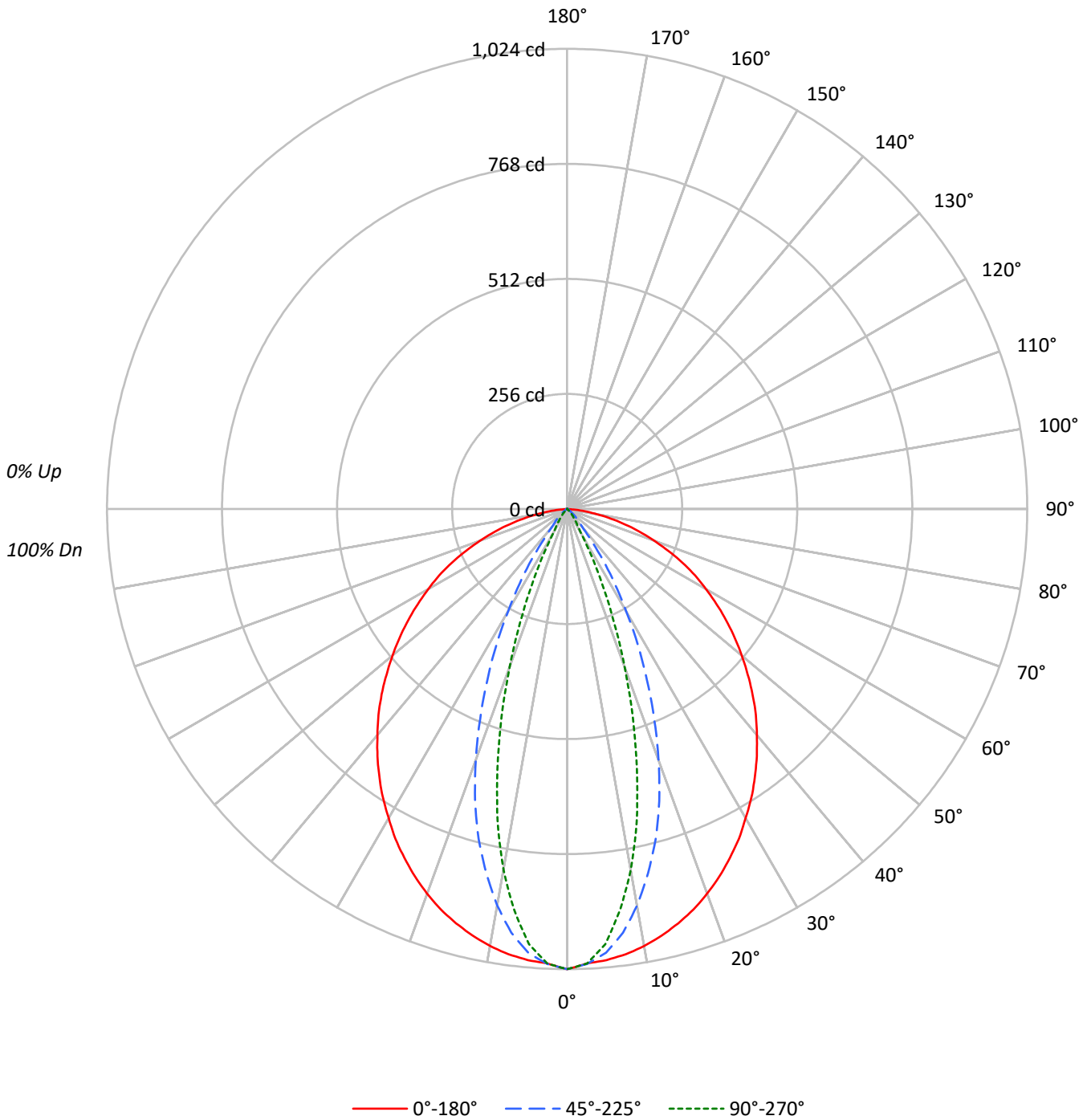
Lumens per Lamp: N/A
Luminaire Lumens: 931.7 lumens
Efficiency: N/A
Efficacy: 30.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (A_{in}): 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	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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91																												
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	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	66	63	61																												
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56																												
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52																												
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49																												
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45																												
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19402	19402	19402
5°	19163	18849	18491
10°	19000	17234	15693
15°	18724	14915	11751
20°	18369	11984	7522
25°	17913	8784	3863
30°	17381	5743	1262
35°	16852	3185	735
40°	16244	1281	408
45°	15642	852	158
50°	14952	486	71
55°	14269	235	40
60°	13516	91	0
65°	12718	54	0
70°	11411	66	0
75°	9824	88	0
80°	7452	0	0
85°	3065	261	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15642 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	9.9
10°-20°	213.3	22.9
20°-30°	216.6	23.2
30°-40°	162.5	17.4
40°-50°	113.8	12.2
50°-60°	69.7	7.5
60°-70°	41.5	4.5
70°-80°	19.1	2.1
80°-90°	3.4	0.4
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°	521.7	56.0
0°-40°	684.2	73.4
0°-60°	867.7	93.1
0°-90°	931.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	931.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1024	1024	1024	1024	1024	
5°	1008	1017	991	972	972	96
15°	955	903	760	644	599	269
25°	857	706	420	240	185	394
35°	729	474	138	41	32	455
45°	584	251	32	9	6	450
55°	432	76	7	2	1	386
65°	284	22	1	1	0	279
75°	134	2	1	1	0	143
85°	14	0	1	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1024.1	1024.1	1024.1	1024.1	1024.1
2.5°	1012.3	1027.6	1013.5	1011.1	1012.3
5°	1007.6	1017.0	991.1	972.3	972.3
7.5°	999.4	999.4	951.1	912.2	900.5
10°	987.6	974.6	895.8	833.4	815.7
12.5°	972.3	941.7	831.0	742.7	714.5
15°	954.6	902.8	760.4	643.9	599.1
17.5°	934.6	859.3	681.5	536.8	485.0
20°	911.1	812.2	594.4	427.3	373.1
22.5°	885.2	760.4	506.2	329.6	271.9
25°	856.9	706.3	420.2	240.1	184.8
27.5°	827.5	649.8	341.4	164.8	113.0
30°	794.5	590.9	262.5	97.7	57.7
32.5°	762.8	534.4	196.6	53.0	42.4
35°	728.6	474.4	137.7	41.2	31.8
37.5°	693.3	417.9	84.8	30.6	23.5
40°	656.8	360.2	51.8	22.4	16.5
42.5°	621.5	306.0	41.2	15.3	10.6
45°	583.8	250.7	31.8	9.4	5.9
47.5°	545.0	200.1	23.5	5.9	3.5
50°	507.3	155.4	16.5	3.5	2.4
52.5°	469.7	114.2	10.6	2.4	1.2
55°	432.0	76.5	7.1	2.4	1.2
57.5°	394.3	54.1	4.7	1.2	1.2
60°	356.7	42.4	2.4	1.2	0.0
62.5°	321.3	33.0	2.4	1.2	1.2
65°	283.7	22.4	1.2	1.2	0.0
67.5°	243.7	14.1	1.2	1.2	0.0
70°	206.0	8.2	1.2	1.2	0.0
72.5°	169.5	4.7	1.2	1.2	0.0
75°	134.2	2.4	1.2	1.2	0.0
77.5°	100.1	1.2	0.0	1.2	0.0
80°	68.3	0.0	0.0	1.2	0.0
82.5°	40.0	0.0	0.0	1.2	0.0
85°	14.1	0.0	1.2	1.2	0.0
87.5°	0.0	0.0	1.2	1.2	0.0
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	16.51	17.77	16.88	18.08	18.40	0.00	0.00	0.00	0.00	0.00
	3H	20.25	21.37	20.63	21.70	22.07	0.00	0.00	0.00	0.00	0.00
	4H	21.57	22.61	21.97	22.96	23.34	0.00	0.00	0.00	0.00	0.00
	6H	22.42	23.38	22.84	23.75	24.14	0.00	0.00	0.00	0.00	0.00
	8H	22.63	23.54	23.07	23.93	24.34	0.00	0.00	0.00	0.00	0.00
	12H	22.70	23.56	23.13	23.95	24.38	0.00	0.00	0.00	0.00	0.00
4H	2H	16.27	17.31	16.67	17.66	18.04	0.00	0.00	0.00	0.00	0.00
	3H	20.01	20.86	20.42	21.27	21.67	0.00	0.00	0.00	0.00	0.00
	4H	21.30	22.07	21.74	22.49	22.93	0.00	0.00	0.00	0.00	0.00
	6H	22.22	22.88	22.69	23.33	23.80	0.00	0.00	0.00	0.00	0.00
	8H	22.48	23.09	22.95	23.54	24.01	0.00	0.00	0.00	0.00	0.00
	12H	22.58	23.12	23.07	23.61	24.08	0.00	0.00	0.00	0.00	0.00
8H	4H	21.16	21.77	21.63	22.22	22.69	0.00	0.00	0.00	0.00	0.00
	6H	22.06	22.56	22.57	23.06	23.54	0.00	0.00	0.00	0.00	0.00
	8H	22.32	22.76	22.84	23.28	23.77	0.00	0.00	0.00	0.00	0.00
	12H	22.44	22.83	22.95	23.32	23.89	0.00	0.00	0.00	0.00	0.00
12H	4H	21.11	21.65	21.60	22.13	22.61	0.00	0.00	0.00	0.00	0.00
	6H	22.00	22.44	22.52	22.96	23.45	0.00	0.00	0.00	0.00	0.00
	8H	22.28	22.66	22.79	23.16	23.73	0.00	0.00	0.00	0.00	0.00