

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: P1055401

Luminaire Tested: S122R3DR-H865D930-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055401
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-H865D930-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

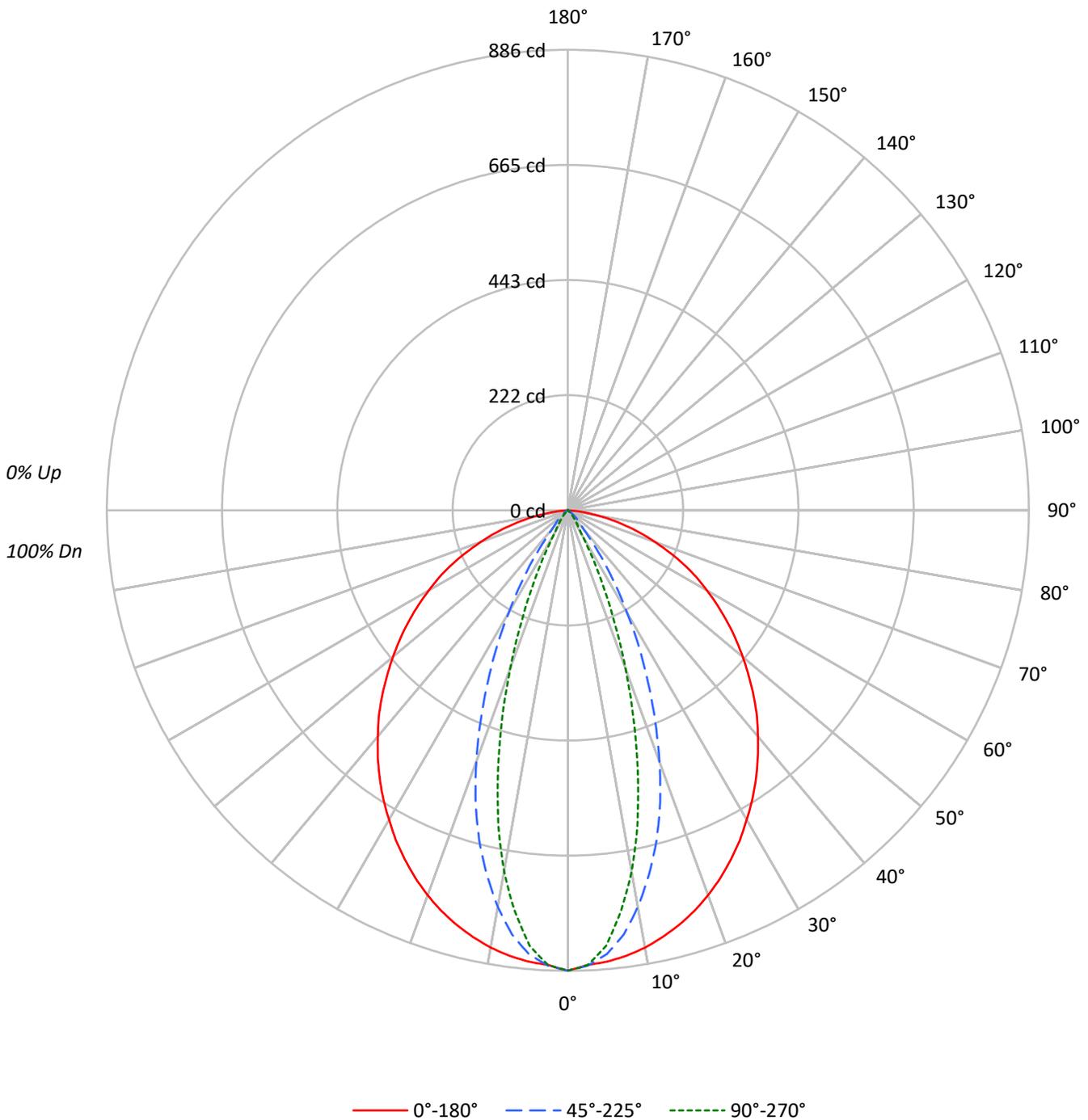
Lumens per Lamp: N/A
Luminaire Lumens: 805.9 lumens
Efficiency: N/A
Efficacy: 26.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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	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	63	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	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16782	16782	16782
5°	16576	16304	15994
10°	16435	14906	13574
15°	16197	12900	10166
20°	15889	10367	6508
25°	15494	7599	3343
30°	15036	4968	1092
35°	14578	2755	636
40°	14050	1108	354
45°	13531	737	137
50°	12933	421	59
55°	12344	201	33
60°	11690	76	0
65°	11001	45	0
70°	9871	55	0
75°	8499	73	0
80°	6448	0	0
85°	2652	217	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13531 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	9.9
10°-20°	184.5	22.9
20°-30°	187.3	23.2
30°-40°	140.6	17.4
40°-50°	98.4	12.2
50°-60°	60.2	7.5
60°-70°	35.9	4.5
70°-80°	16.5	2.1
80°-90°	3.0	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°	451.3	56.0
0°-40°	591.8	73.4
0°-60°	750.5	93.1
0°-90°	805.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	805.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	886	886	886	886	886	
5°	872	880	857	841	841	83
15°	826	781	658	557	518	233
25°	741	611	364	208	160	341
35°	630	410	119	36	28	394
45°	505	217	28	8	5	389
55°	374	66	6	2	1	334
65°	245	19	1	1	0	242
75°	116	2	1	1	0	123
85°	12	0	1	1	0	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	885.8	885.8	885.8	885.8	885.8
2.5°	875.6	888.9	876.7	874.6	875.6
5°	871.6	879.7	857.3	841.0	841.0
7.5°	864.4	864.4	822.7	789.1	778.9
10°	854.3	843.1	774.8	720.9	705.6
12.5°	841.0	814.6	718.8	642.5	618.0
15°	825.8	780.9	657.7	556.9	518.3
17.5°	808.4	743.3	589.5	464.3	419.5
20°	788.1	702.5	514.2	369.6	322.8
22.5°	765.7	657.7	437.8	285.1	235.2
25°	741.2	610.9	363.5	207.7	159.9
27.5°	715.8	562.0	295.3	142.5	97.7
30°	687.3	511.1	227.1	84.5	49.9
32.5°	659.8	462.3	170.0	45.8	36.7
35°	630.3	410.3	119.1	35.6	27.5
37.5°	599.7	361.5	73.3	26.5	20.4
40°	568.1	311.6	44.8	19.3	14.3
42.5°	537.6	264.7	35.6	13.2	9.2
45°	505.0	216.9	27.5	8.1	5.1
47.5°	471.4	173.1	20.4	5.1	3.1
50°	438.8	134.4	14.3	3.1	2.0
52.5°	406.3	98.8	9.2	2.0	1.0
55°	373.7	66.2	6.1	2.0	1.0
57.5°	341.1	46.8	4.1	1.0	1.0
60°	308.5	36.7	2.0	1.0	0.0
62.5°	278.0	28.5	2.0	1.0	1.0
65°	245.4	19.3	1.0	1.0	0.0
67.5°	210.8	12.2	1.0	1.0	0.0
70°	178.2	7.1	1.0	1.0	0.0
72.5°	146.6	4.1	1.0	1.0	0.0
75°	116.1	2.0	1.0	1.0	0.0
77.5°	86.5	1.0	0.0	1.0	0.0
80°	59.1	0.0	0.0	1.0	0.0
82.5°	34.6	0.0	0.0	1.0	0.0
85°	12.2	0.0	1.0	1.0	0.0
87.5°	0.0	0.0	1.0	1.0	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	16.01	17.27	16.37	17.58	17.90	0.00	0.00	0.00	0.00	0.00
	3H	19.75	20.87	20.13	21.20	21.57	0.00	0.00	0.00	0.00	0.00
	4H	21.06	22.10	21.47	22.45	22.84	0.00	0.00	0.00	0.00	0.00
	6H	21.92	22.87	22.33	23.24	23.64	0.00	0.00	0.00	0.00	0.00
	8H	22.13	23.03	22.56	23.43	23.83	0.00	0.00	0.00	0.00	0.00
	12H	22.19	23.06	22.63	23.44	23.87	0.00	0.00	0.00	0.00	0.00
4H	2H	15.76	16.80	16.17	17.15	17.54	0.00	0.00	0.00	0.00	0.00
	3H	19.51	20.36	19.92	20.76	21.17	0.00	0.00	0.00	0.00	0.00
	4H	20.80	21.56	21.24	21.98	22.43	0.00	0.00	0.00	0.00	0.00
	6H	21.72	22.38	22.18	22.82	23.29	0.00	0.00	0.00	0.00	0.00
	8H	21.98	22.59	22.45	23.04	23.51	0.00	0.00	0.00	0.00	0.00
	12H	22.08	22.62	22.57	23.10	23.58	0.00	0.00	0.00	0.00	0.00
8H	4H	20.66	21.27	21.13	21.72	22.19	0.00	0.00	0.00	0.00	0.00
	6H	21.56	22.05	22.06	22.55	23.03	0.00	0.00	0.00	0.00	0.00
	8H	21.81	22.26	22.34	22.78	23.27	0.00	0.00	0.00	0.00	0.00
	12H	21.93	22.32	22.45	22.82	23.39	0.00	0.00	0.00	0.00	0.00
12H	4H	20.61	21.15	21.09	21.63	22.10	0.00	0.00	0.00	0.00	0.00
	6H	21.49	21.94	22.02	22.45	22.95	0.00	0.00	0.00	0.00	0.00
	8H	21.77	22.16	22.29	22.66	23.23	0.00	0.00	0.00	0.00	0.00