

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: P1055359

Luminaire Tested: S122R3DR-H675D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055359
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-H675D830-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

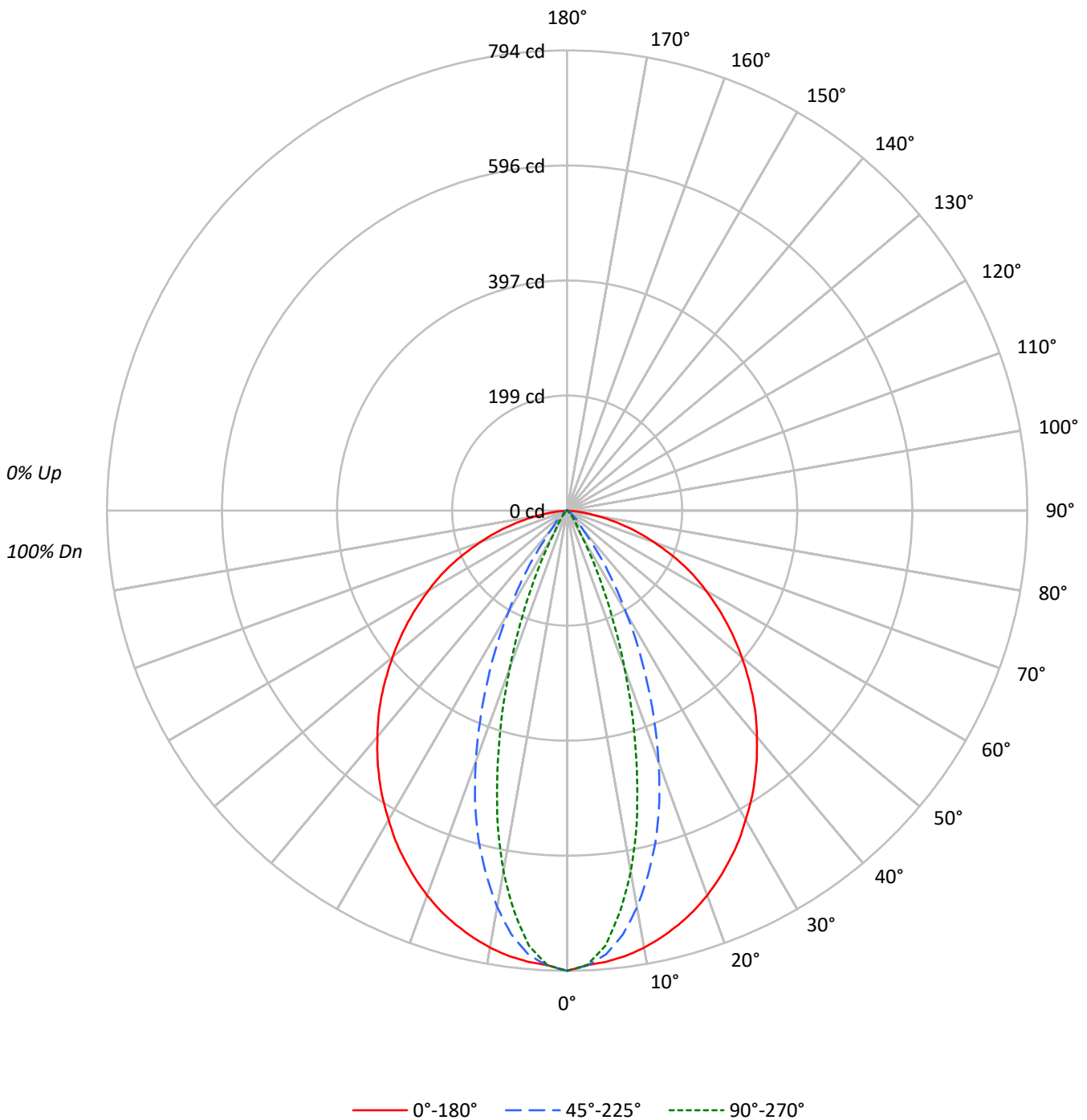
Lumens per Lamp: N/A
Luminaire Lumens: 722.4 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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				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	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	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15045	15045	15045
5°	14859	14616	14338
10°	14733	13363	12168
15°	14518	11565	9113
20°	14244	9293	5833
25°	13891	6811	2996
30°	13478	4452	978
35°	13068	2470	569
40°	12596	994	317
45°	12129	659	123
50°	11595	377	53
55°	11065	182	30
60°	10481	68	0
65°	9863	40	0
70°	8846	50	0
75°	7620	66	0
80°	5772	0	0
85°	2391	196	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12129 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	9.9
10°-20°	165.4	22.9
20°-30°	167.9	23.2
30°-40°	126.0	17.4
40°-50°	88.2	12.2
50°-60°	54.0	7.5
60°-70°	32.2	4.5
70°-80°	14.8	2.1
80°-90°	2.7	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°	404.5	56.0
0°-40°	530.5	73.4
0°-60°	672.8	93.1
0°-90°	722.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	722.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	781	789	768	754	754	74
15°	740	700	590	499	465	209
25°	664	548	326	186	143	306
35°	565	368	107	32	25	353
45°	453	194	25	7	5	349
55°	335	59	6	2	1	300
65°	220	17	1	1	0	217
75°	104	2	1	1	0	111
85°	11	0	1	1	0	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	794.1	794.1	794.1	794.1	794.1
2.5°	785.0	796.8	785.9	784.0	785.0
5°	781.3	788.6	768.5	753.9	753.9
7.5°	774.9	774.9	737.5	707.4	698.2
10°	765.8	755.7	694.6	646.2	632.5
12.5°	753.9	730.2	644.4	575.9	554.0
15°	740.2	700.1	589.6	499.3	464.6
17.5°	724.7	666.3	528.5	416.2	376.0
20°	706.5	629.8	460.9	331.3	289.3
22.5°	686.4	589.6	392.5	255.6	210.8
25°	664.5	547.6	325.8	186.2	143.3
27.5°	641.7	503.8	264.7	127.8	87.6
30°	616.1	458.2	203.5	75.8	44.7
32.5°	591.5	414.4	152.4	41.1	32.9
35°	565.0	367.8	106.8	31.9	24.6
37.5°	537.6	324.0	65.7	23.7	18.3
40°	509.3	279.3	40.2	17.3	12.8
42.5°	481.9	237.3	31.9	11.9	8.2
45°	452.7	194.4	24.6	7.3	4.6
47.5°	422.6	155.2	18.3	4.6	2.7
50°	393.4	120.5	12.8	2.7	1.8
52.5°	364.2	88.5	8.2	1.8	0.9
55°	335.0	59.3	5.5	1.8	0.9
57.5°	305.8	42.0	3.7	0.9	0.9
60°	276.6	32.9	1.8	0.9	0.0
62.5°	249.2	25.6	1.8	0.9	0.9
65°	220.0	17.3	0.9	0.9	0.0
67.5°	188.9	11.0	0.9	0.9	0.0
70°	159.7	6.4	0.9	0.9	0.0
72.5°	131.4	3.7	0.9	0.9	0.0
75°	104.1	1.8	0.9	0.9	0.0
77.5°	77.6	0.9	0.0	0.9	0.0
80°	52.9	0.0	0.0	0.9	0.0
82.5°	31.0	0.0	0.0	0.9	0.0
85°	11.0	0.0	0.9	0.9	0.0
87.5°	0.0	0.0	0.9	0.9	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	15.63	16.89	16.00	17.20	17.52	0.00	0.00	0.00	0.00	0.00
	3H	19.37	20.49	19.75	20.82	21.19	0.00	0.00	0.00	0.00	0.00
	4H	20.68	21.72	21.09	22.08	22.46	0.00	0.00	0.00	0.00	0.00
	6H	21.54	22.49	21.95	22.86	23.26	0.00	0.00	0.00	0.00	0.00
	8H	21.75	22.65	22.18	23.05	23.45	0.00	0.00	0.00	0.00	0.00
	12H	21.82	22.68	22.25	23.06	23.49	0.00	0.00	0.00	0.00	0.00
4H	2H	15.39	16.43	15.79	16.78	17.16	0.00	0.00	0.00	0.00	0.00
	3H	19.13	19.98	19.54	20.38	20.79	0.00	0.00	0.00	0.00	0.00
	4H	20.42	21.18	20.86	21.60	22.05	0.00	0.00	0.00	0.00	0.00
	6H	21.34	22.00	21.80	22.44	22.91	0.00	0.00	0.00	0.00	0.00
	8H	21.60	22.21	22.07	22.66	23.13	0.00	0.00	0.00	0.00	0.00
	12H	21.70	22.24	22.19	22.72	23.20	0.00	0.00	0.00	0.00	0.00
8H	4H	20.28	20.89	20.75	21.34	21.81	0.00	0.00	0.00	0.00	0.00
	6H	21.18	21.67	21.68	22.17	22.65	0.00	0.00	0.00	0.00	0.00
	8H	21.44	21.88	21.96	22.40	22.89	0.00	0.00	0.00	0.00	0.00
	12H	21.55	21.94	22.07	22.44	23.01	0.00	0.00	0.00	0.00	0.00
12H	4H	20.23	20.77	20.72	21.25	21.73	0.00	0.00	0.00	0.00	0.00
	6H	21.11	21.56	21.64	22.08	22.57	0.00	0.00	0.00	0.00	0.00
	8H	21.39	21.78	21.91	22.28	22.85	0.00	0.00	0.00	0.00	0.00