

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: P1055378

Luminaire Tested: S122R3DR-H675D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055378
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H675D935-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

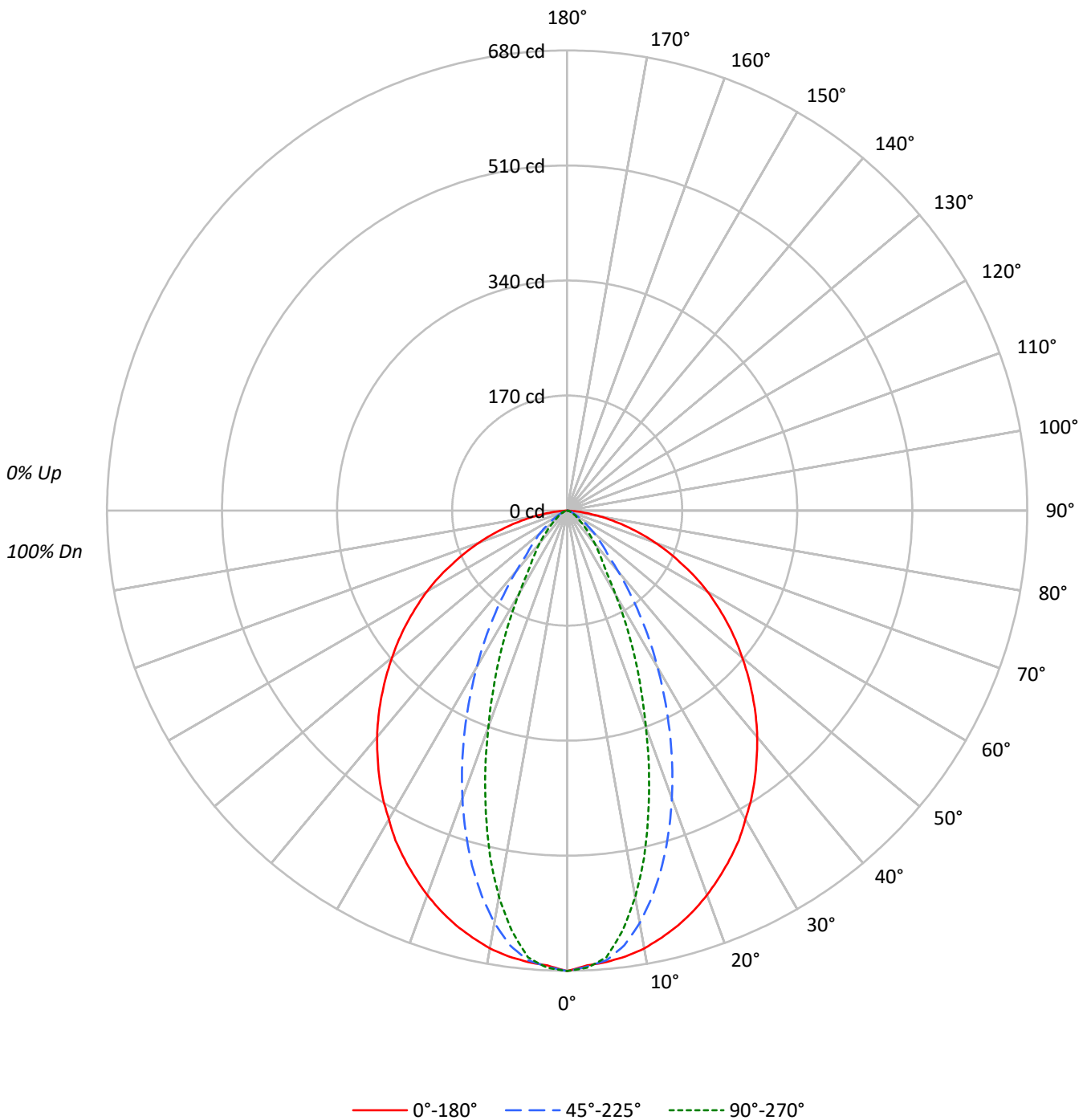
Lumens per Lamp: N/A
Luminaire Lumens: 779.7 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12891	12891	12891
5°	12733	12685	12605
10°	12639	11903	11148
15°	12445	10647	9093
20°	12188	9127	6859
25°	11886	7478	4898
30°	11527	5837	3120
35°	11185	4281	2082
40°	10805	2886	1568
45°	10388	2034	1117
50°	9954	1547	787
55°	9529	1074	578
60°	9067	728	474
65°	8410	525	372
70°	7667	415	321
75°	6654	366	242
80°	5281	273	273
85°	2891	370	174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	8.0
10°-20°	152.7	19.6
20°-30°	174.4	22.4
30°-40°	147.9	19.0
40°-50°	110.4	14.2
50°-60°	71.3	9.1
60°-70°	39.8	5.1
70°-80°	17.5	2.2
80°-90°	3.6	0.5
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°	389.3	49.9
0°-40°	537.2	68.9
0°-60°	718.9	92.2
0°-90°	779.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	779.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	670	678	667	660	663	64
15°	634	619	543	485	464	179
25°	569	502	358	262	234	262
35°	484	364	185	101	90	302
45°	388	230	76	49	42	299
55°	288	109	32	20	18	258
65°	188	40	12	9	8	187
75°	91	8	5	4	3	97
85°	13	1	2	1	1	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	680.4	680.4	680.4	680.4	680.4
2.5°	672.8	682.9	674.5	674.5	676.2
5°	669.5	677.9	667.0	660.3	662.8
7.5°	664.5	670.3	647.8	627.8	626.2
10°	657.0	659.5	618.7	587.8	579.5
12.5°	646.2	640.3	582.8	539.4	525.3
15°	634.5	618.7	542.8	485.3	463.6
17.5°	620.3	592.0	498.6	428.6	401.9
20°	604.5	564.5	452.7	369.4	340.2
22.5°	587.0	533.6	405.2	313.5	284.3
25°	568.6	501.9	357.7	261.8	234.3
27.5°	549.5	468.6	311.0	215.1	185.1
30°	526.9	434.4	266.8	170.1	142.6
32.5°	506.1	398.5	226.0	131.7	108.4
35°	483.6	364.4	185.1	100.9	90.0
37.5°	460.2	330.2	149.2	85.0	75.9
40°	436.9	296.0	116.7	71.7	63.4
42.5°	412.7	262.6	90.0	60.0	51.7
45°	387.7	230.1	75.9	49.2	41.7
47.5°	362.7	197.6	63.4	39.2	33.4
50°	337.7	166.8	52.5	30.8	26.7
52.5°	313.5	137.6	41.7	25.0	21.7
55°	288.5	109.2	32.5	20.0	17.5
57.5°	263.5	85.0	25.0	16.7	15.0
60°	239.3	64.2	19.2	13.3	12.5
62.5°	214.3	51.7	15.0	10.8	10.0
65°	187.6	40.0	11.7	9.2	8.3
67.5°	163.4	29.2	9.2	7.5	6.7
70°	138.4	20.0	7.5	6.7	5.8
72.5°	114.2	12.5	5.8	5.0	5.0
75°	90.9	8.3	5.0	4.2	3.3
77.5°	69.2	5.0	3.3	3.3	2.5
80°	48.4	3.3	2.5	2.5	2.5
82.5°	30.0	2.5	1.7	1.7	1.7
85°	13.3	0.8	1.7	0.8	0.8
87.5°	2.5	0.8	0.8	0.8	0.8
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	17.13	18.45	17.50	18.76	19.08	3.45	4.77	3.82	5.08	5.40
	3H	19.60	20.77	19.98	21.10	21.47	4.30	5.47	4.68	5.80	6.17
	4H	20.56	21.65	20.96	22.00	22.38	4.57	5.66	4.98	6.02	6.40
	6H	21.25	22.25	21.66	22.62	23.01	4.76	5.77	5.18	6.14	6.53
	8H	21.44	22.39	21.87	22.78	23.19	4.84	5.79	5.27	6.18	6.59
	12H	21.52	22.43	21.96	22.81	23.24	4.86	5.77	5.30	6.15	6.58
4H	2H	16.92	18.01	17.32	18.36	18.74	4.02	5.12	4.43	5.47	5.85
	3H	19.40	20.30	19.81	20.70	21.10	5.05	5.95	5.47	6.35	6.76
	4H	20.34	21.15	20.78	21.56	22.01	5.42	6.22	5.86	6.64	7.08
	6H	21.10	21.79	21.56	22.24	22.70	5.71	6.40	6.17	6.85	7.31
	8H	21.34	21.99	21.81	22.43	22.91	5.81	6.46	6.28	6.91	7.38
	12H	21.47	22.04	21.96	22.52	23.00	5.86	6.43	6.34	6.91	7.38
8H	4H	20.21	20.86	20.68	21.30	21.77	5.79	6.43	6.26	6.88	7.35
	6H	20.95	21.48	21.45	21.97	22.45	6.15	6.67	6.65	7.17	7.65
	8H	21.20	21.67	21.72	22.18	22.67	6.29	6.76	6.81	7.28	7.77
	12H	21.35	21.76	21.86	22.25	22.83	6.37	6.79	6.89	7.28	7.85
12H	4H	20.17	20.74	20.65	21.22	21.69	5.91	6.48	6.40	6.96	7.44
	6H	20.89	21.36	21.41	21.88	22.37	6.27	6.74	6.79	7.25	7.75
	8H	21.16	21.57	21.67	22.06	22.64	6.45	6.87	6.97	7.36	7.93