

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: P1055369

Luminaire Tested: S122R3DR-H675D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055369  
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-H675D850-X4F0-XX-UDD-F-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

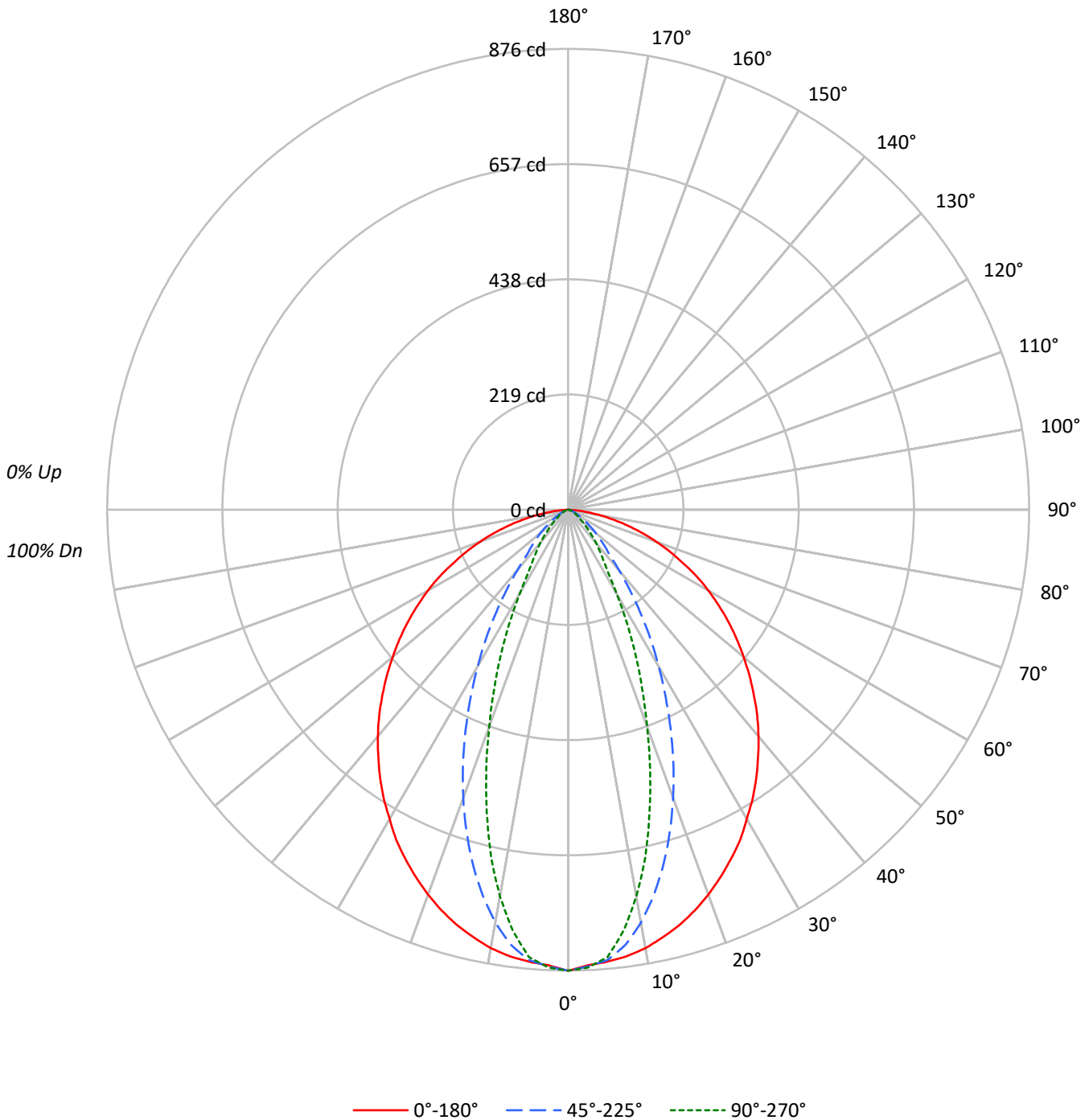
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1004.3 lumens  
Efficiency: N/A  
Efficacy: 42.2 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<sub>in</sub>): 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°	16602	16602	16602
5°	16401	16339	16238
10°	16281	15331	14359
15°	16031	13712	11712
20°	15698	11756	8835
25°	15310	9631	6309
30°	14848	7519	4017
35°	14407	5514	2683
40°	13917	3717	2018
45°	13381	2618	1439
50°	12818	1995	1014
55°	12274	1384	747
60°	11678	936	610
65°	10831	672	480
70°	9877	537	415
75°	8572	468	315
80°	6797	349	349
85°	3739	456	239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13381 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.1	8.0
10°-20°	196.7	19.6
20°-30°	224.6	22.4
30°-40°	190.5	19.0
40°-50°	142.2	14.2
50°-60°	91.9	9.1
60°-70°	51.2	5.1
70°-80°	22.5	2.2
80°-90°	4.7	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°	501.4	49.9
0°-40°	691.9	68.9
0°-60°	925.9	92.2
0°-90°	1004.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1004.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	862	873	859	850	854	82
15°	817	797	699	625	597	230
25°	732	646	461	337	302	337
35°	623	469	238	130	116	389
45°	499	296	98	63	54	385
55°	372	141	42	26	23	332
65°	242	52	15	12	11	240
75°	117	11	6	5	4	125
85°	17	1	2	1	1	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	876.3	876.3	876.3	876.3	876.3
2.5°	866.7	879.5	868.8	868.8	871.0
5°	862.4	873.1	859.1	850.5	853.8
7.5°	855.9	863.4	834.4	808.7	806.5
10°	846.3	849.5	796.9	757.1	746.4
12.5°	832.3	824.8	750.7	694.8	676.6
15°	817.3	796.9	699.1	625.0	597.1
17.5°	799.0	762.5	642.2	552.0	517.6
20°	778.6	727.0	583.1	475.7	438.2
22.5°	756.0	687.3	521.9	403.8	366.2
25°	732.4	646.5	460.7	337.2	301.8
27.5°	707.7	603.5	400.6	277.1	238.4
30°	678.7	559.5	343.7	219.1	183.6
32.5°	651.9	513.3	291.0	169.7	139.6
35°	622.9	469.3	238.4	129.9	116.0
37.5°	592.8	425.3	192.2	109.5	97.7
40°	562.7	381.2	150.3	92.4	81.6
42.5°	531.6	338.3	116.0	77.3	66.6
45°	499.4	296.4	97.7	63.4	53.7
47.5°	467.2	254.5	81.6	50.5	43.0
50°	434.9	214.8	67.7	39.7	34.4
52.5°	403.8	177.2	53.7	32.2	27.9
55°	371.6	140.7	41.9	25.8	22.6
57.5°	339.4	109.5	32.2	21.5	19.3
60°	308.2	82.7	24.7	17.2	16.1
62.5°	276.0	66.6	19.3	14.0	12.9
65°	241.6	51.5	15.0	11.8	10.7
67.5°	210.5	37.6	11.8	9.7	8.6
70°	178.3	25.8	9.7	8.6	7.5
72.5°	147.1	16.1	7.5	6.4	6.4
75°	117.1	10.7	6.4	5.4	4.3
77.5°	89.1	6.4	4.3	4.3	3.2
80°	62.3	4.3	3.2	3.2	3.2
82.5°	38.7	3.2	2.1	2.1	2.1
85°	17.2	1.1	2.1	1.1	1.1
87.5°	3.2	1.1	1.1	1.1	1.1
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	18.01	19.33	18.38	19.64	19.96	4.33	5.65	4.69	5.96	6.27
	3H	20.48	21.65	20.86	21.98	22.35	5.18	6.35	5.56	6.68	7.04
	4H	21.44	22.53	21.84	22.88	23.26	5.45	6.54	5.85	6.89	7.28
	6H	22.13	23.13	22.54	23.50	23.89	5.64	6.64	6.05	7.01	7.41
	8H	22.32	23.27	22.75	23.66	24.07	5.71	6.66	6.14	7.05	7.46
	12H	22.40	23.31	22.84	23.69	24.13	5.74	6.64	6.17	7.03	7.46
4H	2H	17.80	18.89	18.20	19.24	19.62	4.90	5.99	5.30	6.34	6.72
	3H	20.28	21.18	20.69	21.58	21.98	5.93	6.82	6.34	7.23	7.63
	4H	21.23	22.03	21.66	22.45	22.89	6.30	7.10	6.73	7.52	7.96
	6H	21.98	22.67	22.44	23.12	23.58	6.59	7.28	7.05	7.72	8.19
	8H	22.22	22.87	22.69	23.31	23.79	6.68	7.32	7.15	7.77	8.24
	12H	22.35	22.92	22.84	23.40	23.88	6.72	7.29	7.21	7.78	8.25
8H	4H	21.09	21.74	21.56	22.18	22.66	6.67	7.31	7.14	7.76	8.23
	6H	21.83	22.36	22.33	22.85	23.33	7.02	7.55	7.52	8.04	8.53
	8H	22.08	22.55	22.60	23.06	23.55	7.16	7.63	7.68	8.14	8.63
	12H	22.23	22.64	22.74	23.14	23.71	7.24	7.65	7.75	8.15	8.72
12H	4H	21.05	21.62	21.53	22.10	22.57	6.79	7.36	7.27	7.84	8.31
	6H	21.77	22.24	22.29	22.76	23.25	7.14	7.61	7.66	8.13	8.62
	8H	22.04	22.45	22.55	22.94	23.52	7.31	7.73	7.83	8.22	8.79