

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: P1055258

Luminaire Tested: S122R3DR-S865D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055258  
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-S865D840-X4F0-XX-UDD-F-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

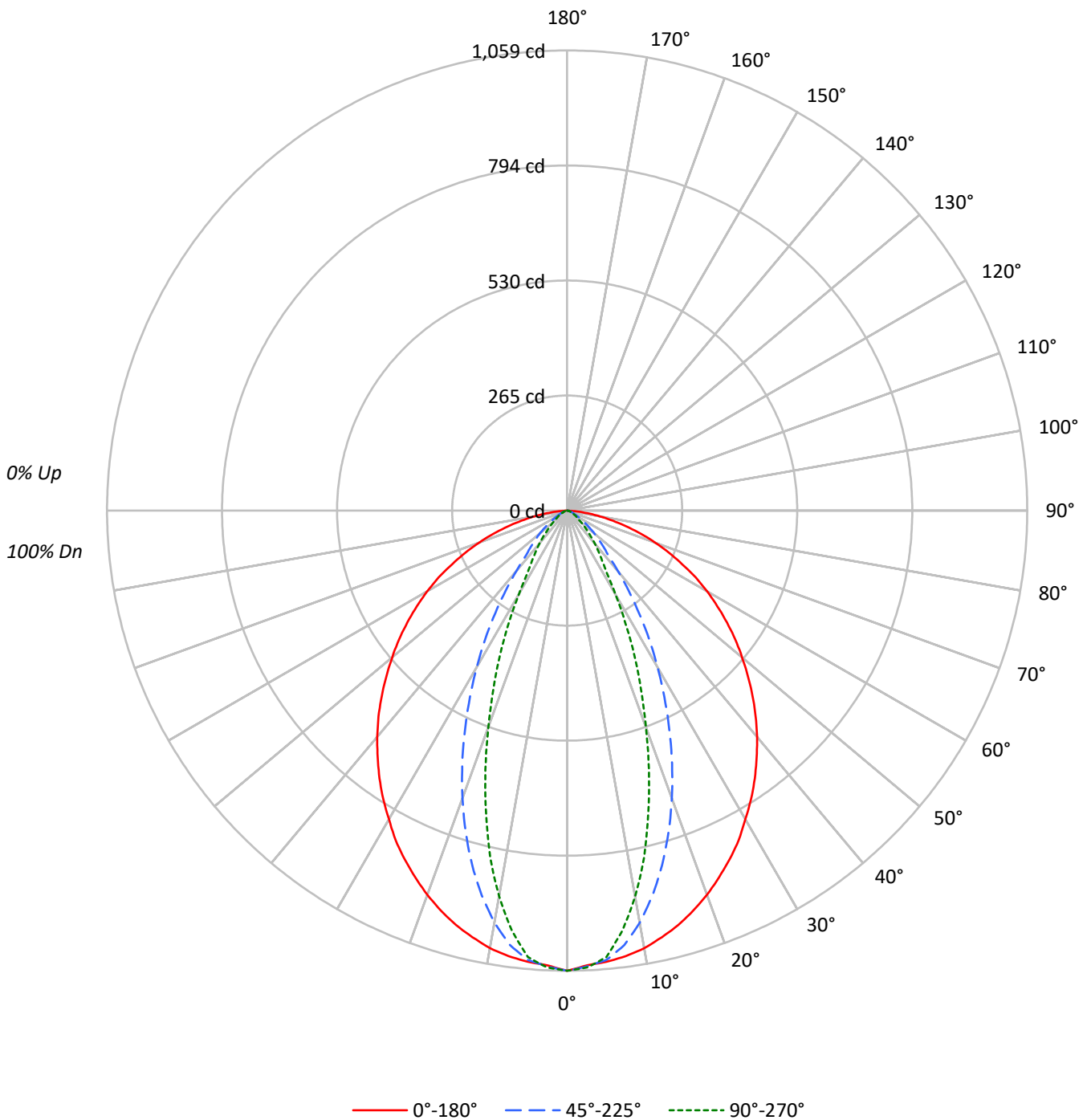
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1213.6 lumens  
Efficiency: N/A  
Efficacy: 35.0 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): 34.7  
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	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					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	20064	20064	20064
5°	19819	19745	19621
10°	19673	18524	17351
15°	19371	16570	14152
20°	18970	14208	10676
25°	18503	11637	7624
30°	17943	9085	4854
35°	17409	6663	3243
40°	16818	4494	2439
45°	16170	3164	1739
50°	15492	2411	1223
55°	14831	1671	902
60°	14115	1129	739
65°	13090	816	583
70°	11932	648	504
75°	10358	571	381
80°	8216	426	426
85°	4521	565	283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16170 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.8	8.0
10°-20°	237.6	19.6
20°-30°	271.5	22.4
30°-40°	230.2	19.0
40°-50°	171.8	14.2
50°-60°	111.0	9.1
60°-70°	61.9	5.1
70°-80°	27.2	2.2
80°-90°	5.6	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°	605.9	49.9
0°-40°	836.1	68.9
0°-60°	1118.9	92.2
0°-90°	1213.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1213.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1042	1055	1038	1028	1032	99
15°	988	963	845	755	722	278
25°	885	781	557	408	365	407
35°	753	567	288	157	140	471
45°	604	358	118	77	65	466
55°	449	170	51	31	27	402
65°	292	62	18	14	13	290
75°	142	13	8	6	5	151
85°	21	1	3	1	1	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1059.0	1059.0	1059.0	1059.0	1059.0
2.5°	1047.3	1062.9	1049.9	1049.9	1052.5
5°	1042.1	1055.1	1038.2	1027.8	1031.7
7.5°	1034.3	1043.4	1008.3	977.2	974.6
10°	1022.6	1026.5	962.9	914.9	901.9
12.5°	1005.8	996.7	907.1	839.6	817.6
15°	987.6	962.9	844.8	755.3	721.5
17.5°	965.5	921.4	776.0	667.0	625.5
20°	940.9	878.6	704.7	574.9	529.5
22.5°	913.6	830.6	630.7	488.0	442.5
25°	885.1	781.2	556.7	407.5	364.7
27.5°	855.2	729.3	484.1	334.8	288.1
30°	820.2	676.1	415.3	264.7	221.9
32.5°	787.7	620.3	351.7	205.0	168.7
35°	752.7	567.1	288.1	157.0	140.2
37.5°	716.4	513.9	232.3	132.4	118.1
40°	680.0	460.7	181.7	111.6	98.6
42.5°	642.4	408.8	140.2	93.4	80.5
45°	603.5	358.2	118.1	76.6	64.9
47.5°	564.5	307.6	98.6	61.0	51.9
50°	525.6	259.5	81.8	48.0	41.5
52.5°	488.0	214.1	64.9	38.9	33.7
55°	449.0	170.0	50.6	31.1	27.3
57.5°	410.1	132.4	38.9	26.0	23.4
60°	372.5	99.9	29.8	20.8	19.5
62.5°	333.5	80.5	23.4	16.9	15.6
65°	292.0	62.3	18.2	14.3	13.0
67.5°	254.4	45.4	14.3	11.7	10.4
70°	215.4	31.1	11.7	10.4	9.1
72.5°	177.8	19.5	9.1	7.8	7.8
75°	141.5	13.0	7.8	6.5	5.2
77.5°	107.7	7.8	5.2	5.2	3.9
80°	75.3	5.2	3.9	3.9	3.9
82.5°	46.7	3.9	2.6	2.6	2.6
85°	20.8	1.3	2.6	1.3	1.3
87.5°	3.9	1.3	1.3	1.3	1.3
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	18.67	19.99	19.04	20.30	20.62	4.99	6.31	5.36	6.62	6.94
	3H	21.14	22.31	21.52	22.64	23.01	5.84	7.01	6.22	7.34	7.71
	4H	22.10	23.19	22.50	23.54	23.92	6.12	7.21	6.52	7.56	7.94
	6H	22.78	23.79	23.20	24.16	24.55	6.31	7.31	6.72	7.68	8.08
	8H	22.98	23.93	23.41	24.32	24.73	6.38	7.33	6.81	7.72	8.13
	12H	23.06	23.97	23.49	24.35	24.78	6.41	7.32	6.84	7.70	8.13
4H	2H	18.46	19.55	18.86	19.90	20.28	5.56	6.66	5.97	7.01	7.39
	3H	20.94	21.83	21.35	22.24	22.64	6.60	7.49	7.01	7.90	8.30
	4H	21.88	22.68	22.32	23.10	23.55	6.96	7.76	7.40	8.18	8.63
	6H	22.64	23.33	23.10	23.78	24.24	7.26	7.95	7.72	8.39	8.86
	8H	22.88	23.53	23.35	23.97	24.44	7.36	8.00	7.82	8.45	8.92
	12H	23.01	23.58	23.50	24.06	24.54	7.40	7.97	7.89	8.45	8.93
8H	4H	21.75	22.40	22.22	22.84	23.31	7.34	7.98	7.80	8.43	8.90
	6H	22.49	23.01	22.99	23.51	23.99	7.70	8.22	8.20	8.72	9.20
	8H	22.73	23.21	23.26	23.72	24.21	7.83	8.31	8.36	8.82	9.31
	12H	22.89	23.30	23.40	23.79	24.37	7.92	8.33	8.43	8.83	9.40
12H	4H	21.71	22.28	22.19	22.76	23.23	7.46	8.03	7.94	8.51	8.98
	6H	22.43	22.90	22.95	23.42	23.91	7.81	8.29	8.34	8.80	9.29
	8H	22.69	23.11	23.21	23.60	24.17	7.99	8.41	8.51	8.90	9.47