

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: P1055254

Luminaire Tested: S122R3DR-S865D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055254  
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-S865D835-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

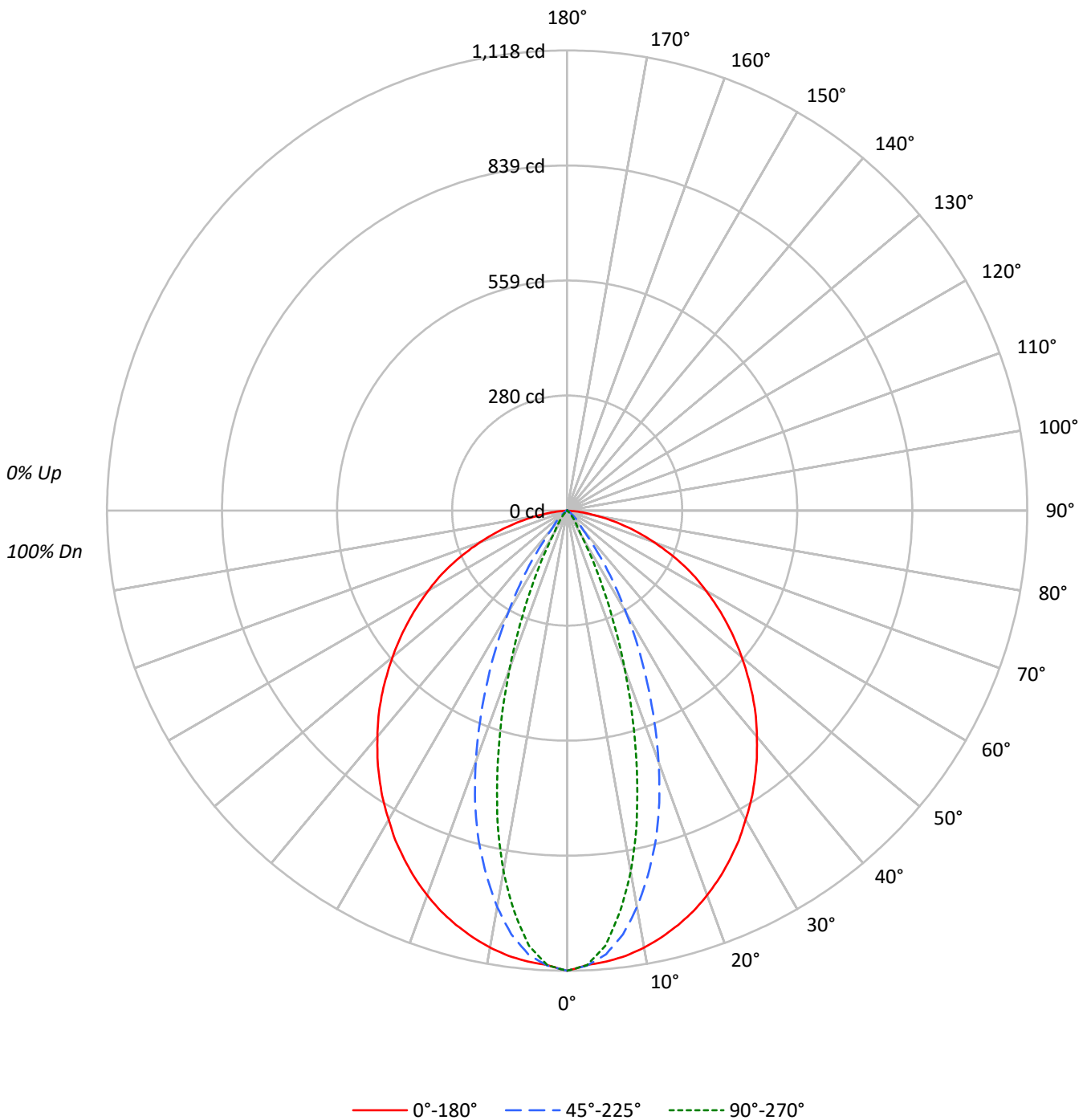
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1017.2 lumens  
Efficiency: N/A  
Efficacy: 29.3 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): 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	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	47	44	43

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

	0°	45°	90°
0°	21181	21181	21181
5°	20920	20578	20188
10°	20743	18813	17133
15°	20442	16284	12830
20°	20053	13085	8214
25°	19556	9591	4219
30°	18976	6270	1378
35°	18399	3479	803
40°	17735	1397	445
45°	17078	930	171
50°	16326	531	77
55°	15577	254	43
60°	14755	99	0
65°	13884	58	0
70°	12458	72	0
75°	10724	95	0
80°	8128	0	0
85°	3348	283	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17078 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	9.9
10°-20°	232.9	22.9
20°-30°	236.4	23.2
30°-40°	177.4	17.4
40°-50°	124.2	12.2
50°-60°	76.0	7.5
60°-70°	45.3	4.5
70°-80°	20.9	2.1
80°-90°	3.8	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°	569.6	56.0
0°-40°	747.0	73.4
0°-60°	947.2	93.1
0°-90°	1017.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1017.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1118	1118	1118	1118	1118	
5°	1100	1110	1082	1062	1062	104
15°	1042	986	830	703	654	294
25°	936	771	459	262	202	431
35°	796	518	150	45	35	497
45°	637	274	35	10	6	491
55°	472	84	8	3	1	422
65°	310	24	1	1	0	305
75°	146	3	1	1	0	156
85°	15	0	1	1	0	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1118.0	1118.0	1118.0	1118.0	1118.0
2.5°	1105.2	1121.9	1106.4	1103.9	1105.2
5°	1100.0	1110.3	1082.0	1061.5	1061.5
7.5°	1091.0	1091.0	1038.3	995.9	983.1
10°	1078.2	1064.0	977.9	909.8	890.6
12.5°	1061.5	1028.1	907.3	810.9	780.0
15°	1042.2	985.7	830.2	702.9	654.1
17.5°	1020.3	938.1	744.1	586.0	529.4
20°	994.6	886.7	649.0	466.5	407.4
22.5°	966.4	830.2	552.6	359.8	296.9
25°	935.5	771.0	458.8	262.2	201.8
27.5°	903.4	709.4	372.7	179.9	123.4
30°	867.4	645.1	286.6	106.7	63.0
32.5°	832.7	583.4	214.6	57.8	46.3
35°	795.5	517.9	150.4	45.0	34.7
37.5°	756.9	456.2	92.5	33.4	25.7
40°	717.1	393.2	56.5	24.4	18.0
42.5°	678.5	334.1	45.0	16.7	11.6
45°	637.4	273.7	34.7	10.3	6.4
47.5°	595.0	218.5	25.7	6.4	3.9
50°	553.9	169.6	18.0	3.9	2.6
52.5°	512.7	124.7	11.6	2.6	1.3
55°	471.6	83.5	7.7	2.6	1.3
57.5°	430.5	59.1	5.1	1.3	1.3
60°	389.4	46.3	2.6	1.3	0.0
62.5°	350.8	36.0	2.6	1.3	1.3
65°	309.7	24.4	1.3	1.3	0.0
67.5°	266.0	15.4	1.3	1.3	0.0
70°	224.9	9.0	1.3	1.3	0.0
72.5°	185.1	5.1	1.3	1.3	0.0
75°	146.5	2.6	1.3	1.3	0.0
77.5°	109.2	1.3	0.0	1.3	0.0
80°	74.5	0.0	0.0	1.3	0.0
82.5°	43.7	0.0	0.0	1.3	0.0
85°	15.4	0.0	1.3	1.3	0.0
87.5°	0.0	0.0	1.3	1.3	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	16.82	18.08	17.18	18.39	18.71	0.00	0.00	0.00	0.00	0.00
	3H	20.56	21.68	20.94	22.01	22.37	0.00	0.00	0.00	0.00	0.00
	4H	21.87	22.91	22.27	23.26	23.65	0.00	0.00	0.00	0.00	0.00
	6H	22.73	23.68	23.14	24.05	24.45	0.00	0.00	0.00	0.00	0.00
	8H	22.94	23.84	23.37	24.23	24.64	0.00	0.00	0.00	0.00	0.00
	12H	23.00	23.87	23.44	24.25	24.68	0.00	0.00	0.00	0.00	0.00
4H	2H	16.57	17.61	16.98	17.96	18.35	0.00	0.00	0.00	0.00	0.00
	3H	20.31	21.17	20.73	21.57	21.98	0.00	0.00	0.00	0.00	0.00
	4H	21.61	22.37	22.05	22.79	23.24	0.00	0.00	0.00	0.00	0.00
	6H	22.53	23.18	22.99	23.63	24.10	0.00	0.00	0.00	0.00	0.00
	8H	22.79	23.40	23.26	23.85	24.32	0.00	0.00	0.00	0.00	0.00
	12H	22.89	23.43	23.38	23.91	24.39	0.00	0.00	0.00	0.00	0.00
8H	4H	21.47	22.08	21.94	22.52	23.00	0.00	0.00	0.00	0.00	0.00
	6H	22.37	22.86	22.87	23.36	23.84	0.00	0.00	0.00	0.00	0.00
	8H	22.62	23.07	23.15	23.58	24.08	0.00	0.00	0.00	0.00	0.00
	12H	22.74	23.13	23.26	23.63	24.20	0.00	0.00	0.00	0.00	0.00
12H	4H	21.42	21.95	21.90	22.44	22.91	0.00	0.00	0.00	0.00	0.00
	6H	22.30	22.75	22.83	23.26	23.76	0.00	0.00	0.00	0.00	0.00
	8H	22.58	22.97	23.10	23.46	24.04	0.00	0.00	0.00	0.00	0.00