

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: P1439714

Luminaire Tested: S122DR-S865D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439714  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-S865D950-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

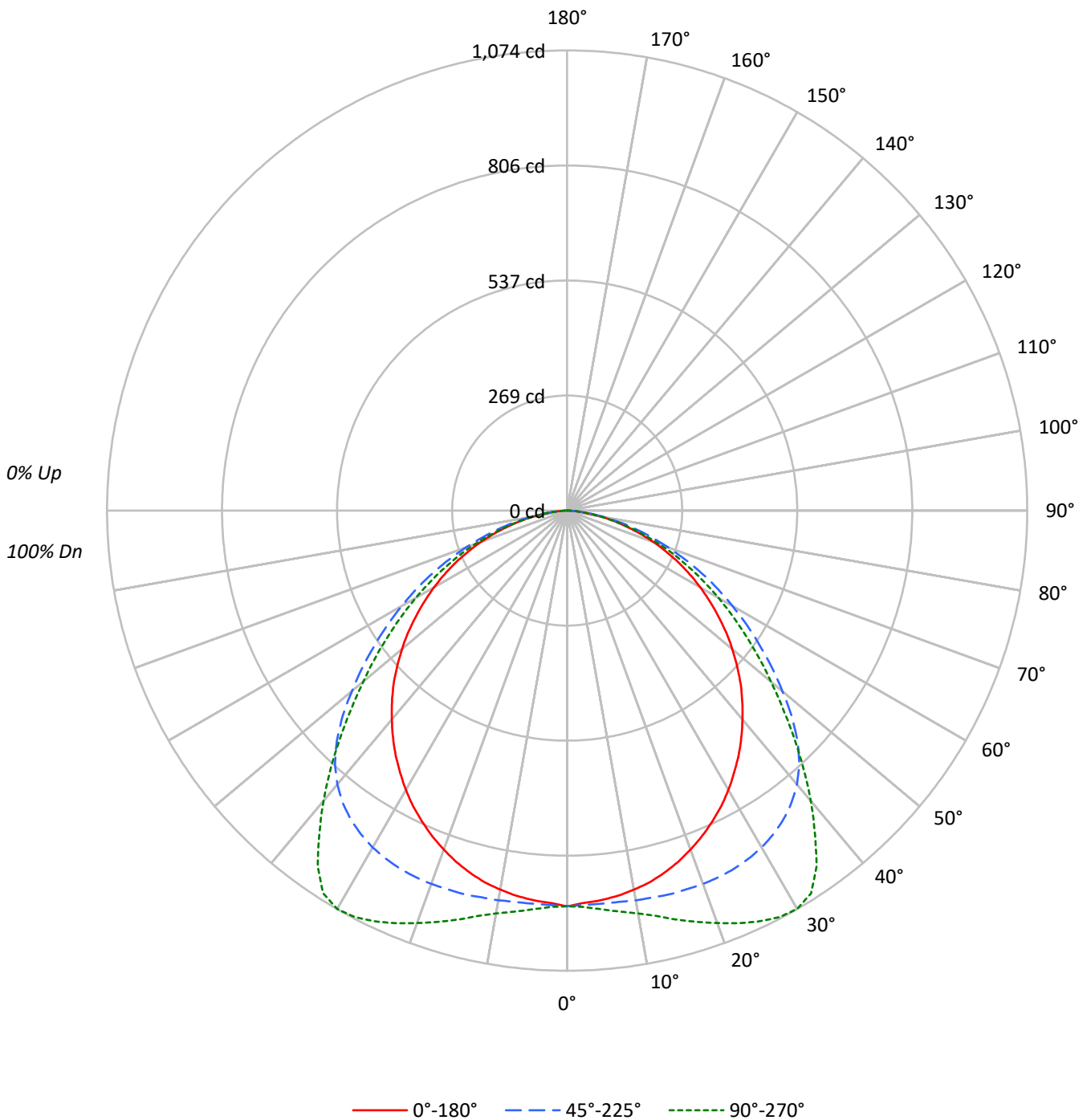
Lumens per Lamp: N/A  
Luminaire Lumens: 2840.3 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.7  
Input Voltage (V): 120  
Input Current (Ain): 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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

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

	0°	45°	90°
0°	17496	17496	17496
5°	17358	17518	17769
10°	17282	17766	18367
15°	17172	18184	19387
20°	16972	18692	20654
25°	16744	19280	22117
30°	16473	19862	23487
35°	16137	20360	23471
40°	15742	20641	21890
45°	15347	20368	20047
50°	14832	19326	18301
55°	14240	18127	16819
60°	13607	16881	15471
65°	12866	15560	14103
70°	11843	13904	12641
75°	10460	12042	10900
80°	8652	9568	8652
85°	5739	6261	6000

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 20529 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.3	3.1
10°-20°	263.8	9.3
20°-30°	428.0	15.1
30°-40°	541.6	19.1
40°-50°	542.4	19.1
50°-60°	454.3	16.0
60°-70°	320.1	11.3
70°-80°	165.2	5.8
80°-90°	36.6	1.3
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°	780.1	27.5
0°-40°	1321.7	46.5
0°-60°	2318.4	81.6
0°-90°	2840.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2840.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	913	928	921	926	934	87
15°	876	901	927	964	988	247
25°	801	844	922	1012	1058	369
35°	698	754	880	994	1015	436
45°	573	633	760	766	748	441
55°	431	484	549	526	509	386
65°	287	319	347	325	315	284
75°	143	157	164	152	149	152
85°	26	29	29	29	28	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	923.5	923.5	923.5	923.5	923.5
2.5°	916.3	930.7	921.1	922.3	925.9
5°	912.7	928.3	921.1	925.9	934.3
7.5°	906.7	923.5	921.1	930.7	943.9
10°	898.3	917.5	923.5	940.3	954.7
12.5°	888.7	909.1	924.7	951.1	969.1
15°	875.5	900.7	927.1	964.3	988.4
17.5°	859.9	889.9	927.1	978.7	1006.4
20°	841.8	876.7	927.1	990.8	1024.4
22.5°	822.6	861.1	925.9	1001.6	1042.4
25°	801.0	844.2	922.3	1012.4	1058.0
27.5°	778.2	825.0	916.3	1020.8	1070.0
30°	753.0	803.4	907.9	1024.4	1073.6
32.5°	725.4	780.6	895.9	1017.2	1059.2
35°	697.7	754.2	880.3	994.4	1014.8
37.5°	667.7	726.6	859.9	949.9	949.9
40°	636.5	696.5	834.6	888.7	885.1
42.5°	605.3	665.3	802.2	828.6	816.6
45°	572.8	632.9	760.2	766.2	748.2
47.5°	538.0	596.9	710.9	702.5	682.1
50°	503.2	560.8	655.7	641.3	620.9
52.5°	468.4	523.6	602.9	582.4	564.4
55°	431.1	484.0	548.8	526.0	509.2
57.5°	395.1	444.3	497.2	472.0	457.5
60°	359.1	403.5	445.5	421.5	408.3
62.5°	323.0	361.5	396.3	372.3	360.3
65°	287.0	319.4	347.1	325.4	314.6
67.5°	249.8	278.6	297.8	278.6	271.4
70°	213.8	236.6	251.0	234.2	228.2
72.5°	177.7	197.0	206.6	193.3	187.3
75°	142.9	157.3	164.5	152.5	148.9
77.5°	109.3	120.1	123.7	115.3	110.5
80°	79.3	85.3	87.7	81.7	79.3
82.5°	49.2	54.0	56.4	51.6	50.4
85°	26.4	28.8	28.8	28.8	27.6
87.5°	9.6	12.0	12.0	12.0	10.8
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	21.43	23.04	21.79	23.35	23.67	21.94	23.55	22.31	23.87	24.18
	3H	23.00	24.45	23.38	24.78	25.14	23.41	24.86	23.79	25.19	25.55
	4H	23.54	24.90	23.93	25.25	25.63	23.90	25.27	24.30	25.62	25.99
	6H	23.88	25.14	24.29	25.51	25.90	24.20	25.47	24.61	25.83	26.22
	8H	23.96	25.17	24.39	25.56	25.96	24.28	25.48	24.70	25.87	26.27
	12H	24.00	25.15	24.43	25.54	25.96	24.31	25.47	24.74	25.85	26.28
4H	2H	22.18	23.55	22.58	23.90	24.27	22.58	23.95	22.98	24.30	24.67
	3H	23.95	25.09	24.36	25.49	25.89	24.25	25.39	24.66	25.79	26.19
	4H	24.60	25.63	25.03	26.04	26.48	24.84	25.87	25.27	26.28	26.72
	6H	25.04	25.94	25.50	26.38	26.84	25.24	26.13	25.69	26.58	27.03
	8H	25.15	25.99	25.62	26.43	26.90	25.34	26.18	25.80	26.62	27.08
	12H	25.21	25.97	25.70	26.44	26.91	25.40	26.15	25.88	26.62	27.09
8H	4H	24.88	25.72	25.34	26.16	26.63	25.10	25.94	25.56	26.38	26.84
	6H	25.42	26.12	25.92	26.61	27.08	25.58	26.28	26.08	26.77	27.24
	8H	25.58	26.20	26.09	26.71	27.20	25.73	26.35	26.24	26.86	27.34
	12H	25.69	26.24	26.19	26.73	27.29	25.83	26.38	26.33	26.87	27.43
12H	4H	24.90	25.65	25.38	26.13	26.60	25.11	25.87	25.60	26.34	26.81
	6H	25.45	26.08	25.96	26.58	27.07	25.61	26.23	26.12	26.74	27.23
	8H	25.66	26.21	26.16	26.70	27.26	25.80	26.35	26.31	26.84	27.40