

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: P1439706

Luminaire Tested: S122DR-S865D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439706  
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-S865D830-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

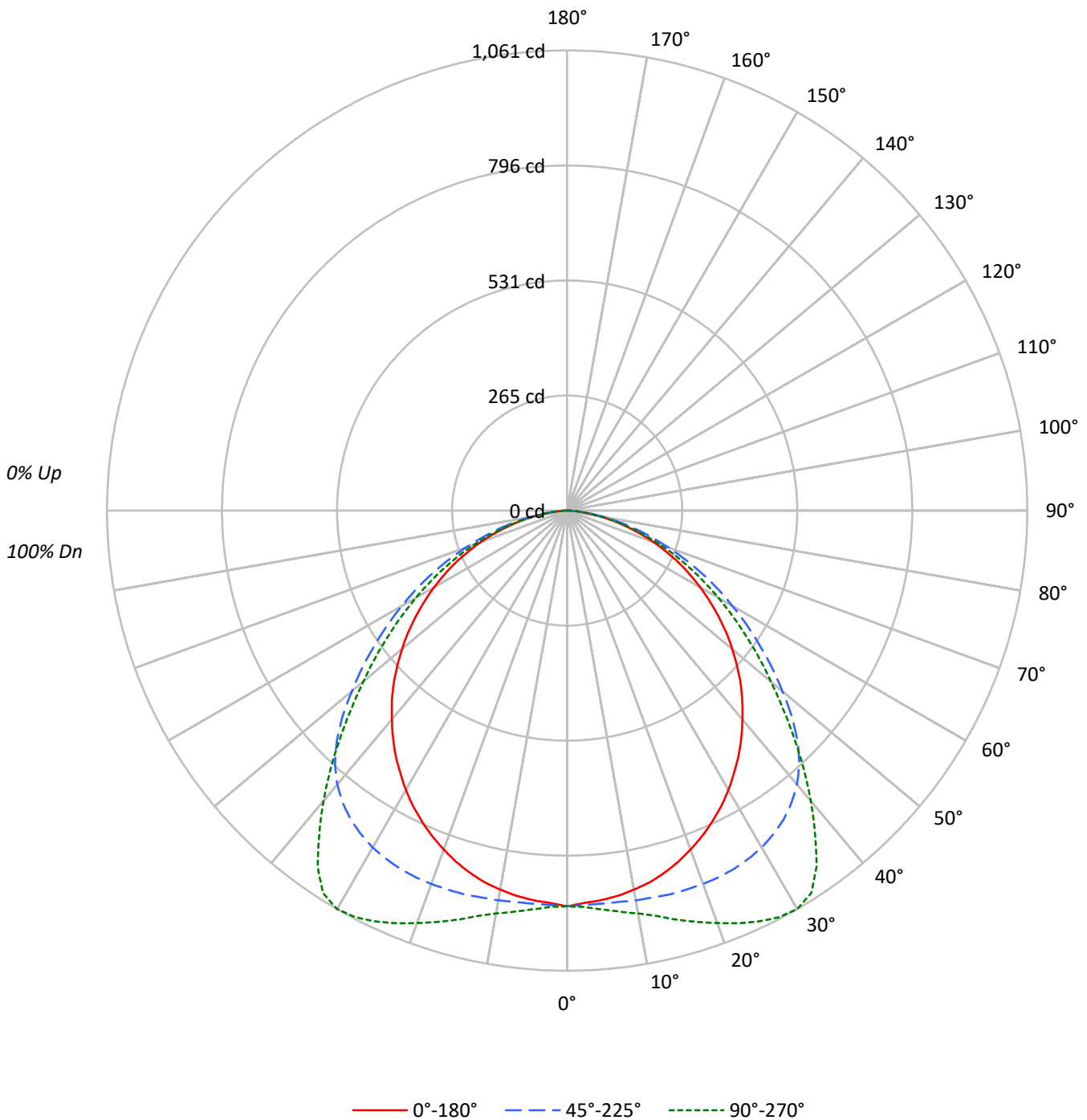
Lumens per Lamp: N/A  
Luminaire Lumens: 2806.2 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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°	17286	17286	17286
5°	17149	17307	17556
10°	17074	17553	18147
15°	16966	17967	19153
20°	16769	18468	20406
25°	16544	19048	21851
30°	16274	19623	23205
35°	15945	20115	23189
40°	15552	20394	21626
45°	15165	20122	19806
50°	14652	19094	18080
55°	14071	17909	16618
60°	13444	16680	15286
65°	12714	15372	13938
70°	11699	13738	12486
75°	10336	11895	10768
80°	8543	9448	8543
85°	5674	6195	5934

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 20283 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.3	3.1
10°-20°	260.6	9.3
20°-30°	422.9	15.1
30°-40°	535.1	19.1
40°-50°	535.9	19.1
50°-60°	448.8	16.0
60°-70°	316.3	11.3
70°-80°	163.2	5.8
80°-90°	36.2	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°	770.7	27.5
0°-40°	1305.8	46.5
0°-60°	2290.5	81.6
0°-90°	2806.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2806.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	902	917	910	915	923	86
15°	865	890	916	953	976	244
25°	791	834	911	1000	1045	365
35°	689	745	870	982	1003	431
45°	566	625	751	757	739	436
55°	426	478	542	520	503	381
65°	284	316	343	322	311	280
75°	141	155	162	151	147	150
85°	26	28	28	28	27	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	912.4	912.4	912.4	912.4	912.4
2.5°	905.3	919.5	910.0	911.2	914.8
5°	901.7	917.2	910.0	914.8	923.1
7.5°	895.8	912.4	910.0	919.5	932.6
10°	887.5	906.5	912.4	929.0	943.3
12.5°	878.0	898.2	913.6	939.7	957.5
15°	865.0	889.9	916.0	952.8	976.5
17.5°	849.5	879.2	916.0	967.0	994.3
20°	831.7	866.1	916.0	978.9	1012.1
22.5°	812.7	850.7	914.8	989.5	1029.9
25°	791.4	834.1	911.2	1000.2	1045.3
27.5°	768.8	815.1	905.3	1008.5	1057.2
30°	743.9	793.8	897.0	1012.1	1060.7
32.5°	716.6	771.2	885.1	1005.0	1046.5
35°	689.4	745.1	869.7	982.4	1002.6
37.5°	659.7	717.8	849.5	938.5	938.5
40°	628.8	688.2	824.6	878.0	874.4
42.5°	598.0	657.3	792.6	818.7	806.8
45°	566.0	625.3	751.0	757.0	739.2
47.5°	531.5	589.7	702.4	694.1	673.9
50°	497.1	554.1	647.8	633.6	613.4
52.5°	462.7	517.3	595.6	575.4	557.7
55°	426.0	478.2	542.2	519.7	503.1
57.5°	390.4	439.0	491.2	466.3	452.1
60°	354.8	398.7	440.2	416.5	403.4
62.5°	319.2	357.1	391.5	367.8	355.9
65°	283.6	315.6	342.9	321.5	310.9
67.5°	246.8	275.3	294.2	275.3	268.1
70°	211.2	233.7	248.0	231.4	225.4
72.5°	175.6	194.6	204.1	191.0	185.1
75°	141.2	155.4	162.5	150.7	147.1
77.5°	108.0	118.6	122.2	113.9	109.2
80°	78.3	84.2	86.6	80.7	78.3
82.5°	48.6	53.4	55.8	51.0	49.8
85°	26.1	28.5	28.5	28.5	27.3
87.5°	9.5	11.9	11.9	11.9	10.7
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	21.39	23.00	21.75	23.31	23.63	21.90	23.51	22.26	23.83	24.14
	3H	22.96	24.41	23.33	24.74	25.10	23.37	24.82	23.74	25.15	25.51
	4H	23.49	24.86	23.89	25.21	25.58	23.86	25.23	24.26	25.57	25.95
	6H	23.84	25.10	24.25	25.47	25.86	24.16	25.43	24.57	25.79	26.18
	8H	23.92	25.13	24.34	25.51	25.91	24.23	25.44	24.66	25.83	26.23
	12H	23.96	25.11	24.39	25.49	25.92	24.27	25.42	24.70	25.81	26.23
4H	2H	22.14	23.51	22.54	23.86	24.23	22.54	23.91	22.94	24.25	24.63
	3H	23.91	25.05	24.32	25.45	25.85	24.21	25.35	24.62	25.74	26.14
	4H	24.56	25.59	24.99	26.00	26.44	24.80	25.83	25.23	26.24	26.68
	6H	25.00	25.90	25.46	26.34	26.80	25.20	26.09	25.65	26.53	26.99
	8H	25.11	25.95	25.57	26.39	26.86	25.30	26.13	25.76	26.58	27.04
	12H	25.17	25.92	25.65	26.40	26.87	25.36	26.11	25.84	26.58	27.05
8H	4H	24.84	25.68	25.30	26.12	26.59	25.06	25.89	25.52	26.34	26.80
	6H	25.38	26.07	25.87	26.56	27.04	25.54	26.24	26.04	26.72	27.20
	8H	25.54	26.16	26.05	26.67	27.16	25.68	26.31	26.20	26.81	27.30
	12H	25.64	26.19	26.15	26.68	27.25	25.79	26.34	26.29	26.83	27.39
12H	4H	24.86	25.61	25.34	26.08	26.55	25.07	25.82	25.55	26.30	26.77
	6H	25.41	26.03	25.92	26.54	27.03	25.57	26.19	26.08	26.70	27.19
	8H	25.61	26.17	26.12	26.66	27.22	25.76	26.31	26.26	26.80	27.36