

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: P1439664

Luminaire Tested: S122DR-H865D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439664  
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-H865D850-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

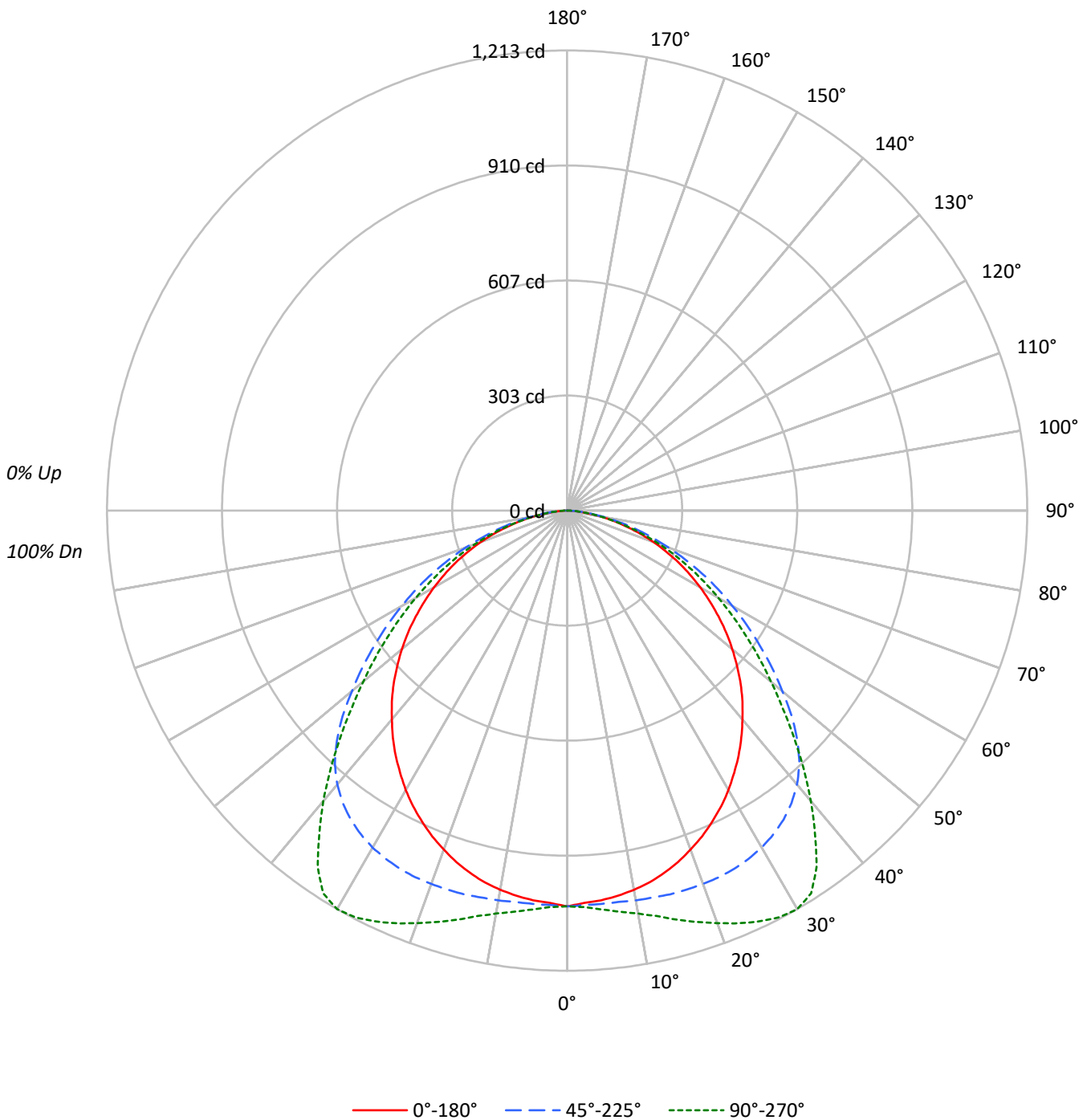
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3208.8 lumens  
Efficiency: N/A  
Efficacy: 103.8 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): 30.9  
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°	19766	19766	19766
5°	19610	19790	20074
10°	19523	20071	20750
15°	19398	20544	21901
20°	19174	21117	23333
25°	18916	21780	24985
30°	18608	22439	26534
35°	18230	23001	26515
40°	17782	23320	24730
45°	17338	23010	22646
50°	16756	21835	20673
55°	16089	20479	18999
60°	15369	19071	17479
65°	14534	17578	15937
70°	13378	15704	14281
75°	11815	13608	12312
80°	9765	10801	9765
85°	6478	7087	6782

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 23192 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	3.1
10°-20°	298.0	9.3
20°-30°	483.5	15.1
30°-40°	611.8	19.1
40°-50°	612.8	19.1
50°-60°	513.2	16.0
60°-70°	361.7	11.3
70°-80°	186.6	5.8
80°-90°	41.4	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°	881.3	27.5
0°-40°	1493.1	46.5
0°-60°	2619.1	81.6
0°-90°	3208.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3208.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1031	1049	1041	1046	1056	98
15°	989	1018	1047	1089	1117	279
25°	905	954	1042	1144	1195	417
35°	788	852	994	1123	1146	493
45°	647	715	859	866	845	498
55°	487	547	620	594	575	436
65°	324	361	392	368	356	320
75°	161	178	186	172	168	172
85°	30	33	33	33	31	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1043.3	1043.3	1043.3	1043.3	1043.3
2.5°	1035.2	1051.4	1040.6	1041.9	1046.0
5°	1031.1	1048.7	1040.6	1046.0	1055.5
7.5°	1024.3	1043.3	1040.6	1051.4	1066.4
10°	1014.8	1036.5	1043.3	1062.3	1078.6
12.5°	1003.9	1027.0	1044.6	1074.5	1094.8
15°	989.0	1017.5	1047.4	1089.4	1116.6
17.5°	971.4	1005.3	1047.4	1105.7	1136.9
20°	951.0	990.4	1047.4	1119.3	1157.3
22.5°	929.3	972.7	1046.0	1131.5	1177.6
25°	904.9	953.7	1041.9	1143.7	1195.2
27.5°	879.1	932.0	1035.2	1153.2	1208.8
30°	850.6	907.6	1025.7	1157.3	1212.9
32.5°	819.4	881.8	1012.1	1149.1	1196.6
35°	788.2	852.0	994.5	1123.3	1146.4
37.5°	754.3	820.8	971.4	1073.1	1073.1
40°	719.0	786.9	942.9	1003.9	999.9
42.5°	683.8	751.6	906.3	936.1	922.5
45°	647.1	715.0	858.8	865.6	845.2
47.5°	607.8	674.3	803.2	793.7	770.6
50°	568.5	633.6	740.8	724.5	701.4
52.5°	529.1	591.5	681.1	658.0	637.6
55°	487.1	546.7	620.0	594.2	575.2
57.5°	446.3	502.0	561.7	533.2	516.9
60°	405.6	455.8	503.3	476.2	461.3
62.5°	364.9	408.4	447.7	420.6	407.0
65°	324.2	360.9	392.1	367.7	355.5
67.5°	282.2	314.8	336.5	314.8	306.6
70°	241.5	267.3	283.5	264.6	257.8
72.5°	200.8	222.5	233.3	218.4	211.6
75°	161.4	177.7	185.9	172.3	168.2
77.5°	123.5	135.7	139.7	130.2	124.8
80°	89.5	96.3	99.0	92.3	89.5
82.5°	55.6	61.1	63.8	58.3	57.0
85°	29.8	32.6	32.6	32.6	31.2
87.5°	10.9	13.6	13.6	13.6	12.2
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	21.85	23.46	22.22	23.78	24.09	22.37	23.98	22.73	24.29	24.61
	3H	23.42	24.88	23.80	25.20	25.56	23.83	25.29	24.21	25.61	25.97
	4H	23.96	25.33	24.36	25.67	26.05	24.33	25.69	24.72	26.04	26.42
	6H	24.30	25.57	24.71	25.93	26.32	24.63	25.89	25.04	26.26	26.65
	8H	24.39	25.59	24.81	25.98	26.38	24.70	25.91	25.12	26.30	26.69
	12H	24.42	25.58	24.85	25.96	26.39	24.73	25.89	25.16	26.27	26.70
4H	2H	22.61	23.97	23.01	24.32	24.70	23.00	24.37	23.40	24.72	25.09
	3H	24.38	25.52	24.79	25.92	26.32	24.67	25.81	25.08	26.21	26.61
	4H	25.03	26.05	25.46	26.47	26.90	25.26	26.29	25.70	26.71	27.14
	6H	25.47	26.36	25.92	26.80	27.26	25.66	26.56	26.12	27.00	27.46
	8H	25.58	26.42	26.04	26.86	27.32	25.76	26.60	26.22	27.04	27.51
	12H	25.64	26.39	26.12	26.87	27.34	25.82	26.57	26.30	27.05	27.52
8H	4H	25.31	26.14	25.77	26.59	27.05	25.52	26.36	25.98	26.80	27.27
	6H	25.85	26.54	26.34	27.03	27.50	26.01	26.70	26.50	27.19	27.67
	8H	26.01	26.63	26.52	27.14	27.62	26.15	26.77	26.66	27.28	27.77
	12H	26.11	26.66	26.62	27.15	27.71	26.25	26.80	26.76	27.29	27.85
12H	4H	25.32	26.07	25.80	26.55	27.02	25.54	26.29	26.02	26.77	27.24
	6H	25.87	26.50	26.39	27.01	27.49	26.03	26.66	26.54	27.16	27.65
	8H	26.08	26.63	26.59	27.12	27.68	26.22	26.77	26.73	27.26	27.83