

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: P1439662

Luminaire Tested: S122DR-H865D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439662  
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-H865D835-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

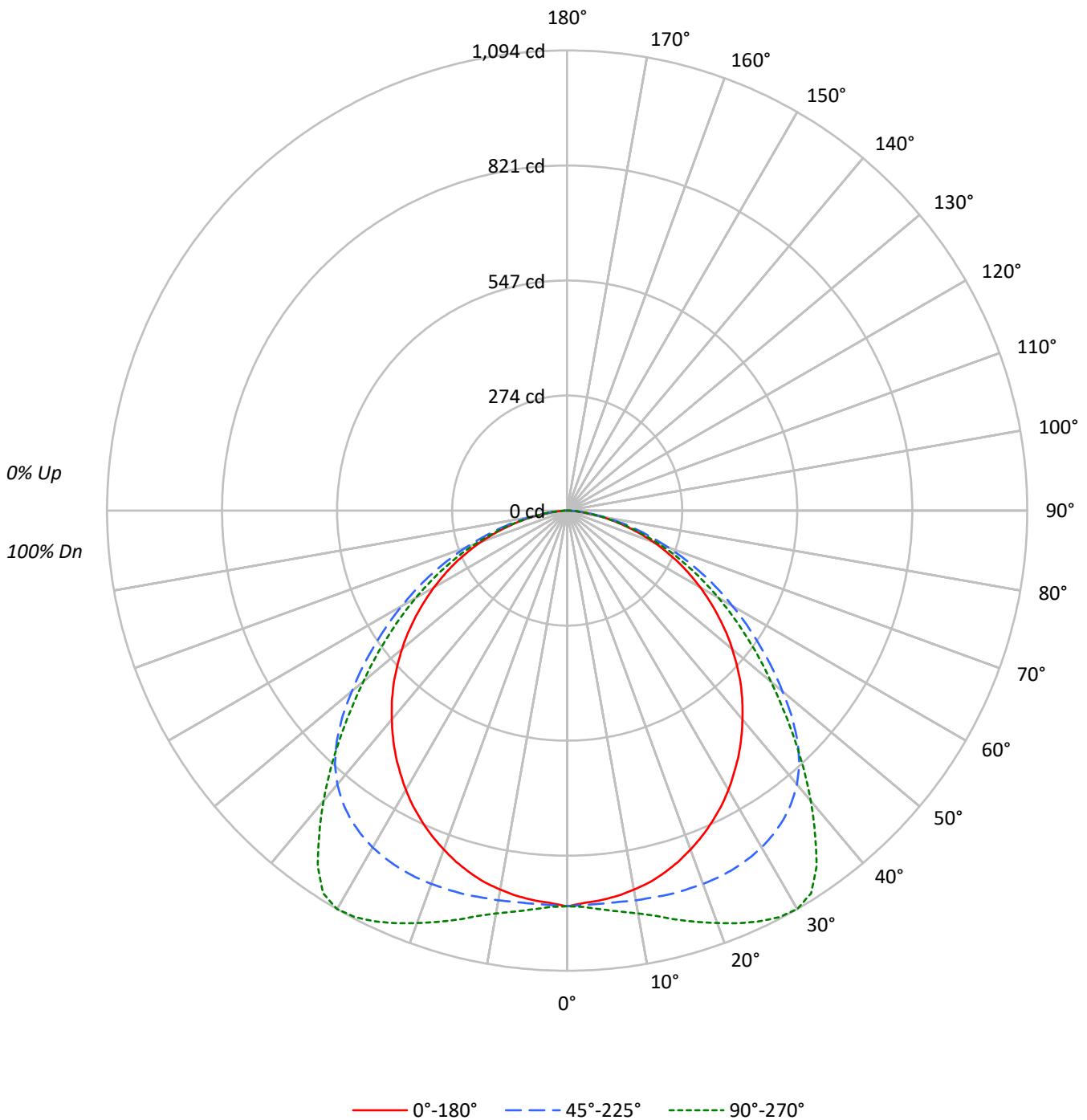
Lumens per Lamp: N/A  
Luminaire Lumens: 2893.4 lumens  
Efficiency: N/A  
Efficacy: 93.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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°	17822	17822	17822
5°	17681	17845	18102
10°	17605	18097	18711
15°	17492	18524	19748
20°	17291	19041	21039
25°	17058	19640	22531
30°	16779	20232	23927
35°	16440	20739	23908
40°	16036	21027	22298
45°	15634	20749	20419
50°	15109	19686	18643
55°	14507	18468	17133
60°	13861	17199	15759
65°	13108	15847	14368
70°	12065	14164	12874
75°	10658	12269	11105
80°	8805	9743	8805
85°	5848	6391	6108

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 20912 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.0	3.1
10°-20°	268.7	9.3
20°-30°	436.0	15.1
30°-40°	551.7	19.1
40°-50°	552.5	19.1
50°-60°	462.8	16.0
60°-70°	326.1	11.3
70°-80°	168.2	5.8
80°-90°	37.3	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°	794.7	27.5
0°-40°	1346.4	46.5
0°-60°	2361.7	81.6
0°-90°	2893.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2893.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	930	946	938	943	952	88
15°	892	918	944	982	1007	251
25°	816	860	940	1031	1078	376
35°	711	768	897	1013	1034	444
45°	584	645	774	780	762	449
55°	439	493	559	536	519	393
65°	292	325	354	332	320	289
75°	146	160	168	155	152	155
85°	27	29	29	29	28	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	940.7	940.7	940.7	940.7	940.7
2.5°	933.4	948.1	938.3	939.5	943.2
5°	929.7	945.6	938.3	943.2	951.8
7.5°	923.6	940.7	938.3	948.1	961.5
10°	915.1	934.6	940.7	957.9	972.6
12.5°	905.3	926.1	942.0	968.9	987.2
15°	891.8	917.5	944.4	982.3	1006.8
17.5°	875.9	906.5	944.4	997.0	1025.2
20°	857.6	893.0	944.4	1009.3	1043.5
22.5°	838.0	877.1	943.2	1020.3	1061.9
25°	816.0	860.0	939.5	1031.3	1077.8
27.5°	792.7	840.4	933.4	1039.8	1090.0
30°	767.0	818.4	924.8	1043.5	1093.7
32.5°	738.9	795.2	912.6	1036.2	1079.0
35°	710.8	768.3	896.7	1012.9	1033.7
37.5°	680.2	740.1	875.9	967.7	967.7
40°	648.4	709.5	850.2	905.3	901.6
42.5°	616.6	677.7	817.2	844.1	831.9
45°	583.5	644.7	774.4	780.5	762.1
47.5°	548.1	608.0	724.2	715.7	694.9
50°	512.6	571.3	667.9	653.3	632.5
52.5°	477.1	533.4	614.1	593.3	575.0
55°	439.2	493.0	559.1	535.8	518.7
57.5°	402.5	452.6	506.5	480.8	466.1
60°	365.8	411.0	453.9	429.4	415.9
62.5°	329.1	368.2	403.7	379.2	367.0
65°	292.4	325.4	353.5	331.5	320.5
67.5°	254.5	283.8	303.4	283.8	276.5
70°	217.8	241.0	255.7	238.6	232.4
72.5°	181.1	200.6	210.4	197.0	190.8
75°	145.6	160.3	167.6	155.4	151.7
77.5°	111.3	122.3	126.0	117.4	112.5
80°	80.7	86.9	89.3	83.2	80.7
82.5°	50.2	55.1	57.5	52.6	51.4
85°	26.9	29.4	29.4	29.4	28.1
87.5°	9.8	12.2	12.2	12.2	11.0
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	21.49	23.10	21.86	23.42	23.73	22.01	23.62	22.37	23.93	24.25
	3H	23.06	24.52	23.44	24.84	25.20	23.47	24.93	23.85	25.25	25.61
	4H	23.60	24.97	24.00	25.31	25.69	23.97	25.33	24.37	25.68	26.06
	6H	23.94	25.21	24.35	25.57	25.96	24.27	25.53	24.68	25.90	26.29
	8H	24.03	25.23	24.45	25.62	26.02	24.34	25.55	24.76	25.94	26.33
	12H	24.06	25.22	24.49	25.60	26.03	24.37	25.53	24.80	25.91	26.34
4H	2H	22.25	23.61	22.64	23.96	24.34	22.64	24.01	23.04	24.36	24.74
	3H	24.02	25.16	24.43	25.56	25.96	24.31	25.45	24.72	25.85	26.25
	4H	24.67	25.69	25.10	26.11	26.54	24.91	25.93	25.34	26.35	26.78
	6H	25.11	26.00	25.56	26.45	26.90	25.30	26.20	25.76	26.64	27.10
	8H	25.22	26.06	25.68	26.50	26.96	25.40	26.24	25.86	26.68	27.15
	12H	25.28	26.03	25.76	26.51	26.98	25.46	26.21	25.94	26.69	27.16
8H	4H	24.95	25.79	25.41	26.23	26.69	25.16	26.00	25.62	26.44	26.91
	6H	25.49	26.18	25.98	26.67	27.15	25.65	26.34	26.14	26.83	27.31
	8H	25.65	26.27	26.16	26.78	27.26	25.79	26.41	26.30	26.92	27.41
	12H	25.75	26.30	26.26	26.79	27.35	25.89	26.44	26.40	26.93	27.50
12H	4H	24.96	25.71	25.44	26.19	26.66	25.18	25.93	25.66	26.41	26.88
	6H	25.52	26.14	26.03	26.65	27.13	25.67	26.30	26.18	26.81	27.29
	8H	25.72	26.27	26.23	26.76	27.32	25.86	26.41	26.37	26.90	27.47