

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1058547

Luminaire Tested: S122RDR-H865D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058547  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D850-X4F0-XX-UDD-BVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

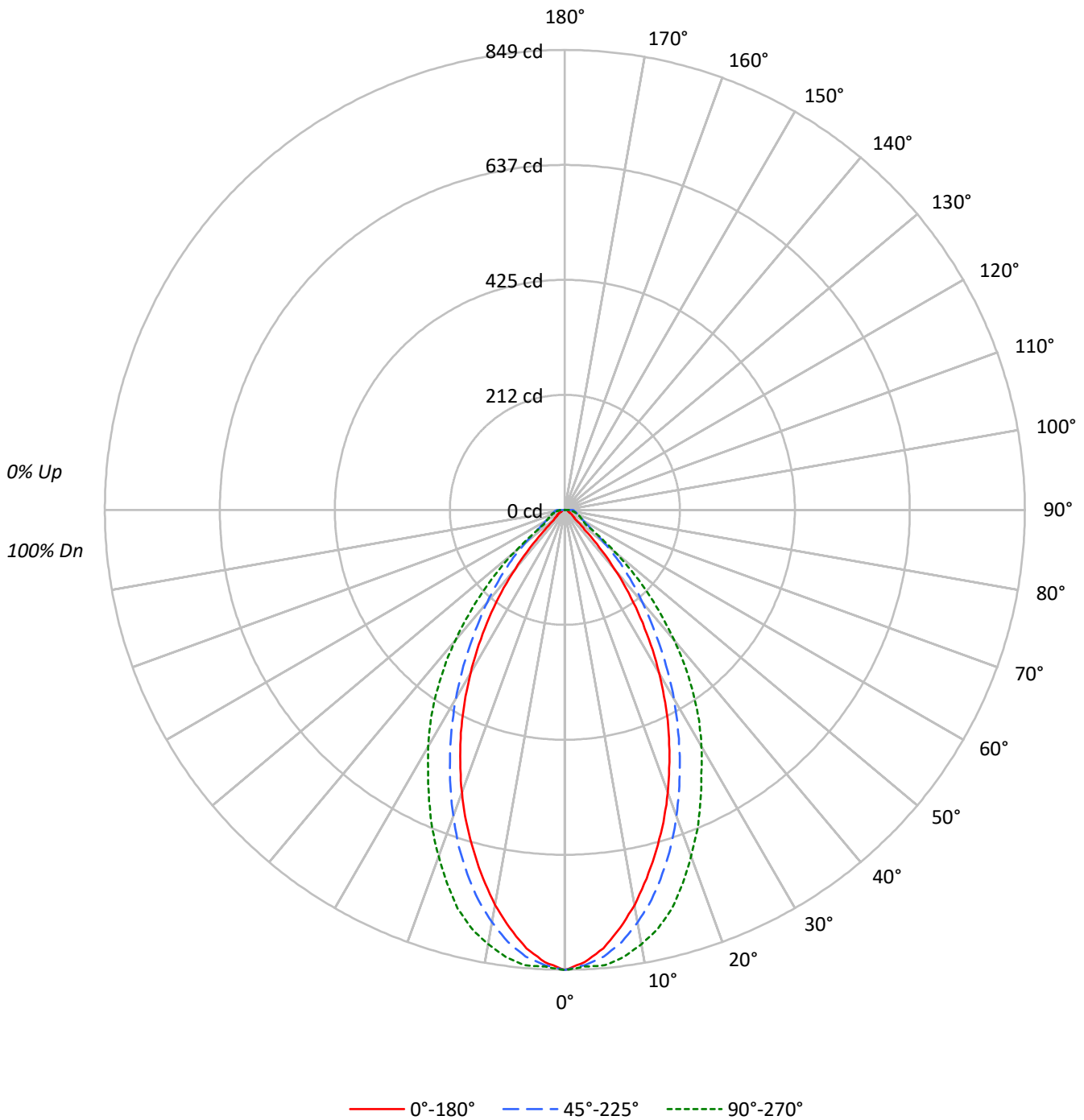
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 924.4 lumens  
Efficiency: N/A  
Efficacy: 29.6 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	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	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	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	67	64	71	66	63	61				
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56				
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52				
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48				
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45				
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42				

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

	0°	45°	90°
0°	15672	15672	15672
5°	15052	15330	15632
10°	13877	14488	15252
15°	12434	13292	14564
20°	10914	11821	13369
25°	9241	10211	12063
30°	7413	8570	10743
35°	5481	6857	9306
40°	3437	5369	7561
45°	1347	4042	5603
50°	663	2730	3433
55°	524	1792	1531
60°	402	1454	1406
65°	297	1367	1367
70°	367	1392	1392
75°	385	1547	1454
80°	574	2019	1583
85°	1143	3451	2308

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 6303 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.6	8.4
10°-20°	196.1	21.2
20°-30°	234.6	25.4
30°-40°	197.5	21.4
40°-50°	112.4	12.2
50°-60°	44.4	4.8
60°-70°	27.9	3.0
70°-80°	20.7	2.2
80°-90°	13.2	1.4
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°	508.3	55.0
0°-40°	705.8	76.3
0°-60°	862.6	93.3
0°-90°	924.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	924.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	849	849	849	849	849	
5°	813	830	828	837	844	75
15°	651	674	696	736	762	182
25°	454	474	502	553	592	207
35°	243	265	304	370	413	151
45°	52	91	155	194	215	49
55°	16	35	56	57	48	15
65°	7	31	31	30	31	8
75°	5	22	22	20	20	6
85°	5	15	16	15	11	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	849.3	849.3	849.3	849.3	849.3
2.5°	835.8	850.7	841.2	842.5	843.9
5°	812.6	830.3	827.6	837.1	843.9
7.5°	778.7	797.7	804.5	820.8	833.0
10°	740.6	762.4	773.2	799.1	814.0
12.5°	697.1	721.6	737.9	770.5	792.3
15°	650.9	674.0	695.8	736.5	762.4
17.5°	604.7	627.8	650.9	695.8	723.0
20°	555.8	577.6	602.0	649.6	680.8
22.5°	504.2	527.3	551.7	600.7	638.7
25°	453.9	474.3	501.5	553.1	592.5
27.5°	400.9	421.3	451.2	504.2	546.3
30°	347.9	368.3	402.2	456.6	504.2
32.5°	294.9	316.6	353.3	413.1	460.7
35°	243.3	265.0	304.4	369.6	413.1
37.5°	193.0	217.4	260.9	324.8	365.6
40°	142.7	171.2	222.9	279.9	313.9
42.5°	95.1	130.5	187.5	235.1	263.6
45°	51.6	91.0	154.9	194.3	214.7
47.5°	28.5	58.4	123.7	154.9	167.2
50°	23.1	40.8	95.1	118.2	119.6
52.5°	19.0	36.7	70.7	84.3	77.5
55°	16.3	35.3	55.7	57.1	47.6
57.5°	13.6	34.0	46.2	40.8	40.8
60°	10.9	34.0	39.4	36.7	38.1
62.5°	8.2	34.0	35.3	32.6	34.0
65°	6.8	31.3	31.3	29.9	31.3
67.5°	6.8	28.5	28.5	27.2	28.5
70°	6.8	27.2	25.8	25.8	25.8
72.5°	5.4	24.5	24.5	23.1	23.1
75°	5.4	21.7	21.7	20.4	20.4
77.5°	5.4	20.4	20.4	19.0	17.7
80°	5.4	17.7	19.0	17.7	14.9
82.5°	5.4	16.3	17.7	16.3	12.2
85°	5.4	14.9	16.3	14.9	10.9
87.5°	4.1	14.9	14.9	12.2	8.2
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	7.26	8.48	7.62	8.79	9.11	9.28	10.50	9.65	10.82	11.13
	3H	8.80	9.88	9.18	10.22	10.58	11.25	12.34	11.63	12.67	13.03
	4H	9.35	10.36	9.76	10.71	11.10	12.17	13.18	12.57	13.53	13.91
	6H	9.91	10.84	10.32	11.21	11.60	13.05	13.98	13.46	14.35	14.75
	8H	10.20	11.08	10.63	11.47	11.88	13.45	14.33	13.88	14.72	15.13
	12H	10.55	11.40	10.99	11.78	12.21	13.89	14.74	14.33	15.12	15.55
4H	2H	8.45	9.46	8.85	9.81	10.19	9.90	10.91	10.31	11.27	11.65
	3H	10.64	11.48	11.06	11.88	12.29	12.14	12.98	12.56	13.38	13.79
	4H	11.69	12.44	12.13	12.86	13.30	13.21	13.96	13.65	14.38	14.83
	6H	12.59	13.23	13.05	13.68	14.15	14.32	14.97	14.79	15.42	15.89
	8H	12.97	13.58	13.44	14.02	14.50	14.85	15.45	15.32	15.90	16.37
	12H	13.39	13.92	13.88	14.41	14.88	15.42	15.96	15.91	16.44	16.92
8H	4H	12.49	13.10	12.96	13.55	14.02	13.71	14.31	14.18	14.76	15.23
	6H	13.88	14.37	14.38	14.87	15.35	15.10	15.60	15.61	16.10	16.58
	8H	14.59	15.04	15.12	15.56	16.05	15.84	16.29	16.37	16.80	17.30
	12H	15.34	15.73	15.86	16.23	16.80	16.67	17.07	17.19	17.56	18.13
12H	4H	12.66	13.19	13.14	13.67	14.15	13.81	14.34	14.29	14.83	15.30
	6H	14.21	14.65	14.73	15.17	15.66	15.32	15.77	15.85	16.28	16.78
	8H	15.12	15.52	15.64	16.01	16.58	16.21	16.60	16.72	17.09	17.67