

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: P1058551

Luminaire Tested: S122RDR-H865D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058551  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D850-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

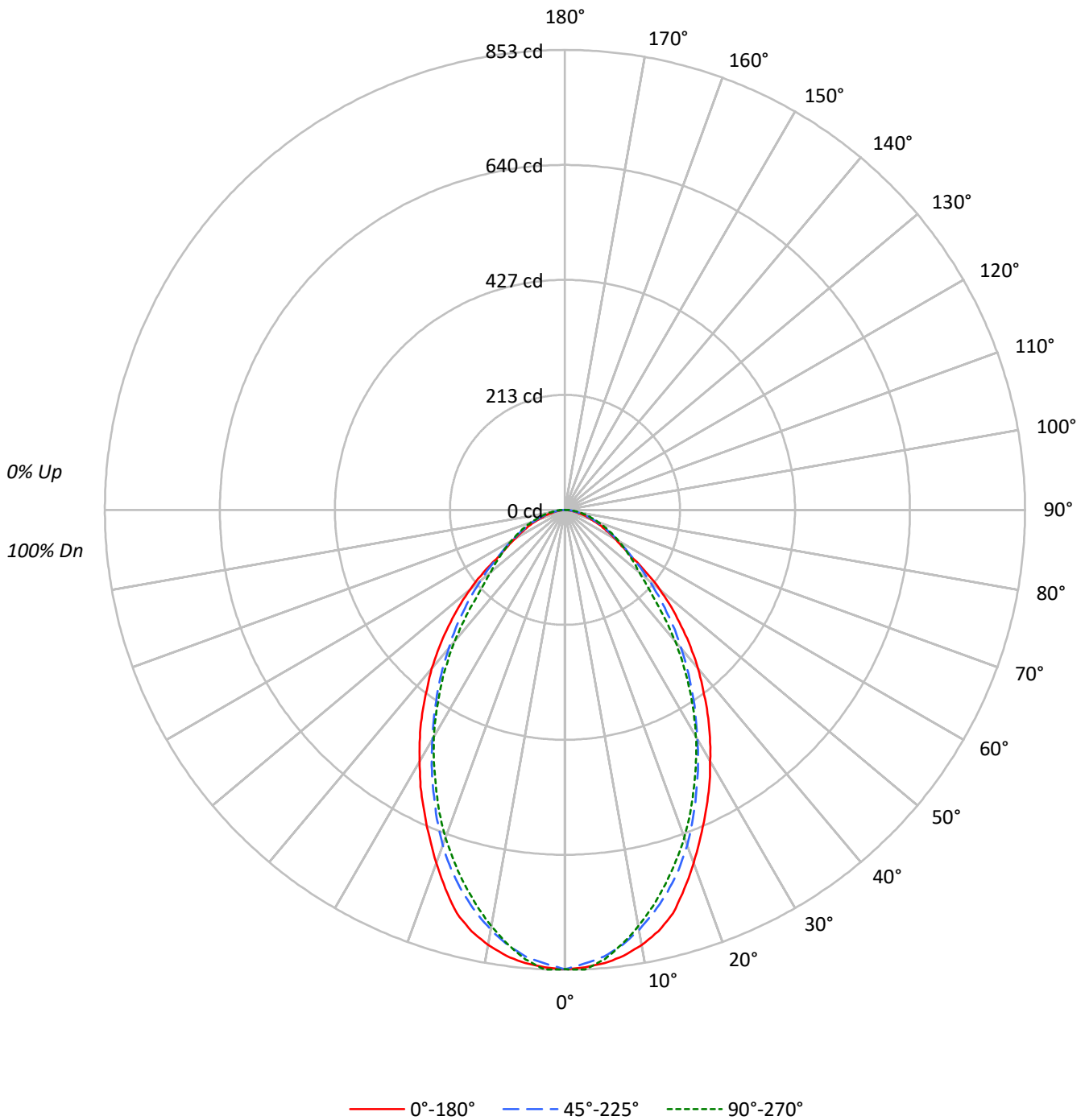
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1294.0 lumens  
Efficiency: N/A  
Efficacy: 41.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
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				100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68				68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61				61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54				54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49				49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44				44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34				34

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

	0°	45°	90°
0°	15722	15722	15722
5°	15632	15406	15506
10°	15355	14821	14694
15°	14799	14022	13737
20°	13695	13001	12709
25°	12568	11740	11520
30°	11476	10464	10349
35°	10391	9261	9047
40°	9250	8072	7648
45°	7967	6939	6125
50°	6583	5842	5141
55°	4758	4845	4626
60°	3956	4155	4207
65°	3375	3615	3851
70°	2784	3221	3512
75°	2324	2709	3194
80°	1732	2168	2880
85°	572	1143	2583

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7967 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.7	6.1
10°-20°	207.4	16.0
20°-30°	268.4	20.7
30°-40°	263.3	20.3
40°-50°	207.3	16.0
50°-60°	135.9	10.5
60°-70°	82.7	6.4
70°-80°	41.3	3.2
80°-90°	8.9	0.7
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°	554.6	42.9
0°-40°	817.9	63.2
0°-60°	1161.0	89.7
0°-90°	1294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1294.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	844	844	832	837	837	80
15°	775	764	734	724	719	216
25°	617	597	577	574	566	284
35°	461	436	411	410	402	288
45°	305	286	266	247	235	235
55°	148	156	151	145	144	140
65°	77	79	83	87	88	77
75°	33	34	38	43	45	35
85°	3	4	5	10	12	6
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	852.0	852.0	852.0	852.0	852.0
2.5°	849.3	850.7	842.5	850.7	853.4
5°	843.9	843.9	831.7	837.1	837.1
7.5°	834.4	833.0	814.1	814.1	812.7
10°	819.5	814.1	791.0	786.9	784.2
12.5°	800.5	791.0	763.9	757.1	753.0
15°	774.7	763.9	734.0	724.5	719.1
17.5°	736.7	725.9	700.1	689.2	683.8
20°	697.4	681.1	662.1	652.6	647.2
22.5°	656.7	637.7	620.0	613.3	607.8
25°	617.3	597.0	576.6	573.9	565.8
27.5°	579.3	554.9	534.6	533.2	526.4
30°	538.6	512.9	491.1	492.5	485.7
32.5°	500.6	476.2	450.4	451.8	443.7
35°	461.3	435.5	411.1	409.7	401.6
37.5°	420.6	396.2	373.1	367.7	359.5
40°	384.0	359.5	335.1	325.6	317.5
42.5°	344.6	322.9	301.2	286.3	275.4
45°	305.3	286.3	265.9	246.9	234.7
47.5°	267.3	252.4	234.7	211.7	203.5
50°	229.3	218.4	203.5	183.2	179.1
52.5°	189.9	185.9	176.4	162.8	161.5
55°	147.9	156.0	150.6	145.2	143.8
57.5°	124.8	126.2	130.2	128.9	128.9
60°	107.2	107.2	112.6	114.0	114.0
62.5°	90.9	92.3	97.7	100.4	100.4
65°	77.3	78.7	82.8	86.8	88.2
67.5°	63.8	66.5	70.6	74.6	76.0
70°	51.6	54.3	59.7	63.8	65.1
72.5°	42.1	43.4	48.8	52.9	54.3
75°	32.6	33.9	38.0	43.4	44.8
77.5°	23.1	25.8	29.8	33.9	36.6
80°	16.3	17.6	20.4	25.8	27.1
82.5°	9.5	10.9	13.6	17.6	19.0
85°	2.7	4.1	5.4	9.5	12.2
87.5°	0.0	0.0	0.0	2.7	5.4
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	15.70	17.09	16.06	17.40	17.72	15.87	17.27	16.24	17.58	17.90
	3H	16.83	18.07	17.21	18.40	18.77	17.33	18.58	17.71	18.91	19.27
	4H	17.18	18.34	17.58	18.69	19.07	17.88	19.04	18.28	19.39	19.77
	6H	17.36	18.44	17.78	18.80	19.20	18.29	19.36	18.70	19.73	20.12
	8H	17.39	18.41	17.82	18.80	19.20	18.42	19.43	18.84	19.82	20.23
	12H	17.38	18.35	17.81	18.73	19.16	18.50	19.47	18.93	19.85	20.28
4H	2H	16.15	17.32	16.56	17.67	18.05	16.30	17.46	16.70	17.81	18.20
	3H	17.49	18.45	17.91	18.85	19.26	17.97	18.93	18.38	19.33	19.74
	4H	17.94	18.80	18.37	19.21	19.66	18.64	19.50	19.07	19.91	20.36
	6H	18.21	18.95	18.67	19.40	19.86	19.17	19.91	19.63	20.36	20.82
	8H	18.25	18.95	18.72	19.39	19.86	19.34	20.03	19.81	20.48	20.95
	12H	18.25	18.86	18.73	19.35	19.82	19.46	20.08	19.95	20.56	21.03
8H	4H	18.15	18.84	18.62	19.29	19.76	18.79	19.48	19.25	19.93	20.40
	6H	18.50	19.07	19.00	19.56	20.04	19.42	19.99	19.92	20.48	20.96
	8H	18.58	19.09	19.10	19.60	20.09	19.65	20.16	20.17	20.67	21.17
	12H	18.59	19.04	19.11	19.54	20.11	19.84	20.29	20.35	20.78	21.35
12H	4H	18.16	18.78	18.65	19.26	19.73	18.77	19.39	19.26	19.87	20.34
	6H	18.52	19.03	19.04	19.55	20.04	19.41	19.92	19.93	20.44	20.93
	8H	18.64	19.09	19.15	19.58	20.15	19.69	20.14	20.20	20.63	21.20