

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: P1058542

Luminaire Tested: S122RDR-H865D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058542  
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-H865D840-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: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

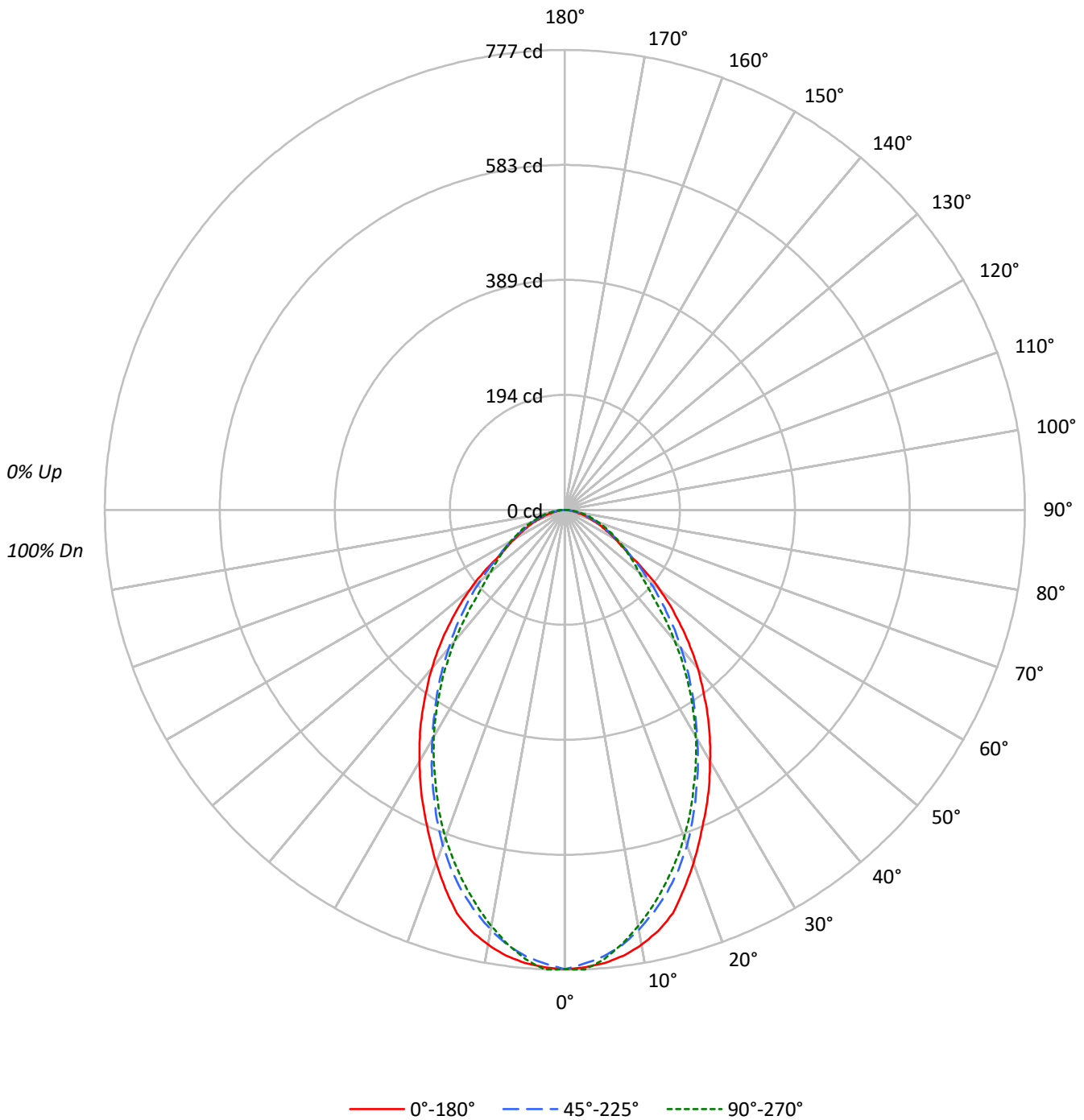
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1178.4 lumens  
Efficiency: N/A  
Efficacy: 37.8 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°	14317	14317	14317
5°	14235	14027	14120
10°	13982	13496	13380
15°	13477	12769	12509
20°	12469	11839	11572
25°	11444	10691	10489
30°	10451	9529	9424
35°	9463	8432	8238
40°	8421	7352	6964
45°	7255	6320	5577
50°	5994	5319	4682
55°	4333	4411	4214
60°	3602	3783	3831
65°	3074	3292	3506
70°	2530	2935	3199
75°	2117	2467	2909
80°	1573	1966	2625
85°	529	1037	2350

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7255 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.7	6.1
10°-20°	188.9	16.0
20°-30°	244.4	20.7
30°-40°	239.7	20.3
40°-50°	188.8	16.0
50°-60°	123.7	10.5
60°-70°	75.3	6.4
70°-80°	37.7	3.2
80°-90°	8.1	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°	505.0	42.9
0°-40°	744.8	63.2
0°-60°	1057.3	89.7
0°-90°	1178.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1178.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	768	768	757	762	762	73
15°	706	696	668	660	655	197
25°	562	544	525	523	515	258
35°	420	397	374	373	366	262
45°	278	261	242	225	214	214
55°	135	142	137	132	131	128
65°	70	72	75	79	80	70
75°	30	31	35	40	41	32
85°	2	4	5	9	11	5
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	775.9	775.9	775.9	775.9	775.9
2.5°	773.4	774.6	767.2	774.6	777.1
5°	768.5	768.5	757.3	762.3	762.3
7.5°	759.8	758.6	741.3	741.3	740.0
10°	746.2	741.3	720.3	716.6	714.1
12.5°	728.9	720.3	695.6	689.4	685.7
15°	705.5	695.6	668.4	659.7	654.8
17.5°	670.9	661.0	637.5	627.6	622.7
20°	635.0	620.2	602.9	594.3	589.3
22.5°	598.0	580.7	564.6	558.4	553.5
25°	562.1	543.6	525.1	522.6	515.2
27.5°	527.5	505.3	486.8	485.5	479.4
30°	490.5	467.0	447.2	448.5	442.3
32.5°	455.9	433.6	410.2	411.4	404.0
35°	420.1	396.6	374.3	373.1	365.7
37.5°	383.0	360.8	339.8	334.8	327.4
40°	349.6	327.4	305.2	296.5	289.1
42.5°	313.8	294.0	274.3	260.7	250.8
45°	278.0	260.7	242.2	224.9	213.7
47.5°	243.4	229.8	213.7	192.7	185.3
50°	208.8	198.9	185.3	166.8	163.1
52.5°	173.0	169.3	160.6	148.3	147.0
55°	134.7	142.1	137.1	132.2	131.0
57.5°	113.7	114.9	118.6	117.4	117.4
60°	97.6	97.6	102.5	103.8	103.8
62.5°	82.8	84.0	89.0	91.4	91.4
65°	70.4	71.7	75.4	79.1	80.3
67.5°	58.1	60.5	64.2	68.0	69.2
70°	46.9	49.4	54.4	58.1	59.3
72.5°	38.3	39.5	44.5	48.2	49.4
75°	29.7	30.9	34.6	39.5	40.8
77.5°	21.0	23.5	27.2	30.9	33.4
80°	14.8	16.1	18.5	23.5	24.7
82.5°	8.6	9.9	12.4	16.1	17.3
85°	2.5	3.7	4.9	8.6	11.1
87.5°	0.0	0.0	0.0	2.5	4.9
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	15.37	16.77	15.73	17.08	17.39	15.55	16.95	15.92	17.26	17.57
	3H	16.50	17.75	16.88	18.08	18.44	17.01	18.26	17.39	18.58	18.95
	4H	16.85	18.02	17.25	18.37	18.75	17.55	18.72	17.95	19.07	19.45
	6H	17.04	18.11	17.45	18.48	18.87	17.97	19.04	18.38	19.41	19.80
	8H	17.06	18.08	17.49	18.47	18.88	18.09	19.11	18.52	19.50	19.90
	12H	17.05	18.02	17.48	18.40	18.83	18.18	19.15	18.61	19.53	19.96
4H	2H	15.83	16.99	16.23	17.34	17.72	15.98	17.14	16.38	17.49	17.87
	3H	17.17	18.12	17.58	18.53	18.93	17.65	18.61	18.06	19.01	19.41
	4H	17.61	18.47	18.05	18.89	19.33	18.31	19.17	18.75	19.59	20.03
	6H	17.88	18.63	18.34	19.07	19.54	18.85	19.59	19.31	20.04	20.50
	8H	17.93	18.62	18.39	19.07	19.54	19.02	19.71	19.48	20.16	20.63
	12H	17.92	18.54	18.41	19.02	19.49	19.14	19.75	19.62	20.23	20.71
8H	4H	17.83	18.52	18.29	18.97	19.43	18.46	19.16	18.93	19.60	20.07
	6H	18.17	18.74	18.67	19.24	19.72	19.09	19.66	19.59	20.16	20.64
	8H	18.25	18.76	18.77	19.27	19.76	19.33	19.84	19.85	20.35	20.84
	12H	18.27	18.72	18.78	19.21	19.78	19.51	19.96	20.03	20.46	21.03
12H	4H	17.84	18.45	18.32	18.93	19.41	18.45	19.06	18.93	19.55	20.02
	6H	18.20	18.71	18.72	19.22	19.71	19.09	19.60	19.61	20.11	20.60
	8H	18.31	18.76	18.83	19.26	19.83	19.37	19.82	19.88	20.31	20.88