

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: P1058461

Luminaire Tested: S122RDR-H675D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058461  
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-H675D840-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: -

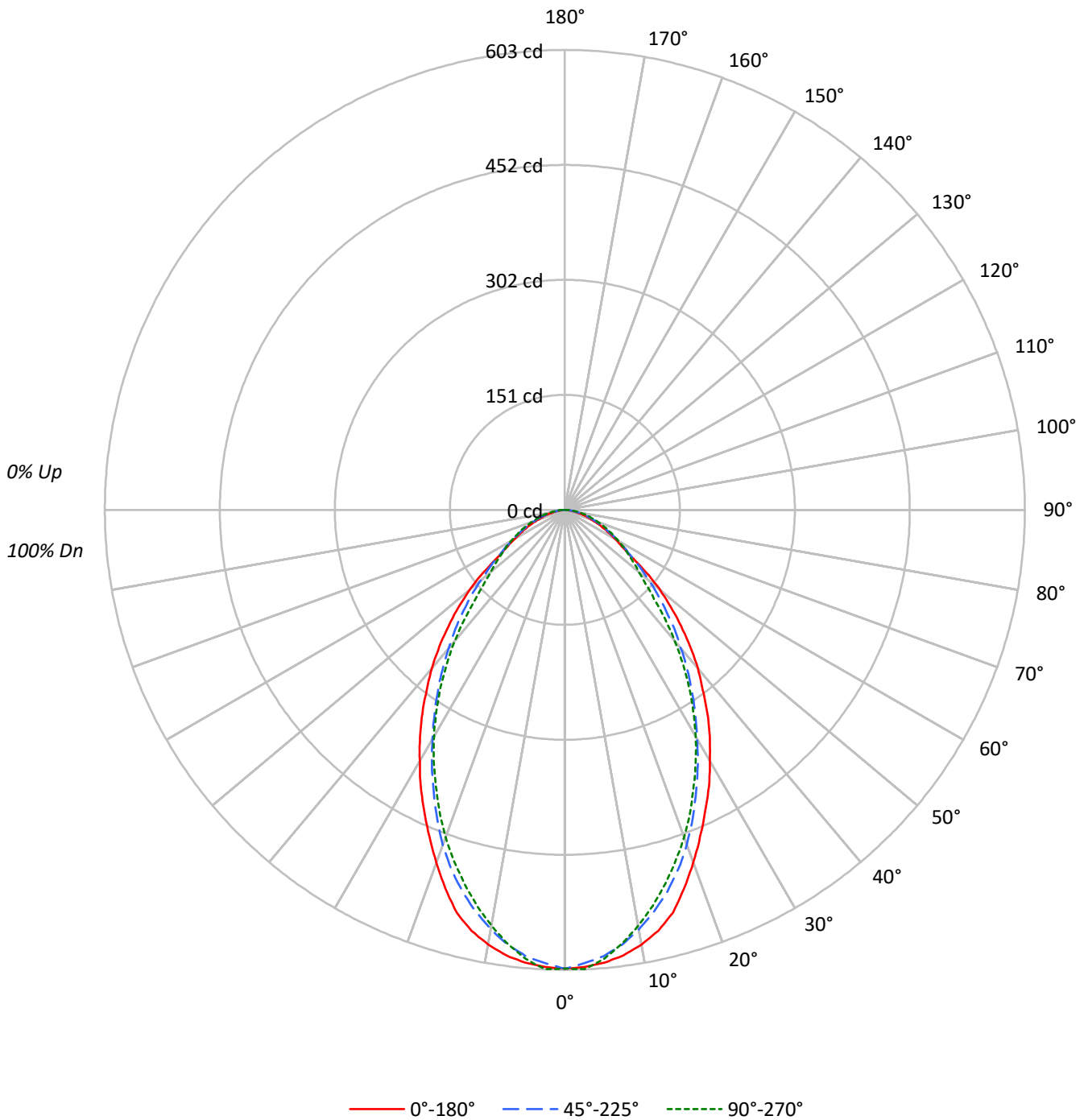
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 913.7 lumens  
Efficiency: N/A  
Efficacy: 38.9 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): 23.5  
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°	11101	11101	11101
5°	11038	10879	10949
10°	10841	10465	10375
15°	10450	9901	9699
20°	9669	9180	8974
25°	8875	8289	8134
30°	8103	7389	7308
35°	7337	6539	6388
40°	6530	5699	5401
45°	5624	4901	4324
50°	4648	4125	3631
55°	3359	3420	3265
60°	2794	2934	2971
65°	2384	2550	2720
70°	1964	2277	2482
75°	1640	1911	2253
80°	1222	1530	2040
85°	402	805	1821

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5624 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.6	6.1
10°-20°	146.5	16.0
20°-30°	189.5	20.7
30°-40°	185.9	20.3
40°-50°	146.4	16.0
50°-60°	95.9	10.5
60°-70°	58.4	6.4
70°-80°	29.2	3.2
80°-90°	6.3	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°	391.6	42.9
0°-40°	577.5	63.2
0°-60°	819.8	89.7
0°-90°	913.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	913.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	596	596	587	591	591	56
15°	547	539	518	512	508	152
25°	436	422	407	405	400	200
35°	326	308	290	289	284	203
45°	216	202	188	174	166	166
55°	104	110	106	102	102	99
65°	55	56	58	61	62	54
75°	23	24	27	31	32	24
85°	2	3	4	7	9	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	601.6	601.6	601.6	601.6	601.6
2.5°	599.7	600.7	594.9	600.7	602.6
5°	595.9	595.9	587.3	591.1	591.1
7.5°	589.2	588.2	574.8	574.8	573.8
10°	578.6	574.8	558.5	555.6	553.7
12.5°	565.2	558.5	539.4	534.6	531.7
15°	547.0	539.4	518.3	511.6	507.7
17.5°	520.2	512.5	494.3	486.7	482.8
20°	492.4	480.9	467.5	460.8	457.0
22.5°	463.7	450.3	437.8	433.0	429.2
25°	435.9	421.5	407.1	405.2	399.5
27.5°	409.1	391.8	377.5	376.5	371.7
30°	380.3	362.1	346.8	347.8	343.0
32.5°	353.5	336.3	318.1	319.0	313.3
35°	325.7	307.5	290.3	289.3	283.6
37.5°	297.0	279.7	263.4	259.6	253.9
40°	271.1	253.9	236.6	229.9	224.2
42.5°	243.3	228.0	212.7	202.1	194.5
45°	215.5	202.1	187.8	174.4	165.7
47.5°	188.7	178.2	165.7	149.4	143.7
50°	161.9	154.2	143.7	129.3	126.5
52.5°	134.1	131.2	124.5	115.0	114.0
55°	104.4	110.2	106.3	102.5	101.5
57.5°	88.1	89.1	92.0	91.0	91.0
60°	75.7	75.7	79.5	80.5	80.5
62.5°	64.2	65.1	69.0	70.9	70.9
65°	54.6	55.6	58.4	61.3	62.3
67.5°	45.0	46.9	49.8	52.7	53.6
70°	36.4	38.3	42.2	45.0	46.0
72.5°	29.7	30.7	34.5	37.4	38.3
75°	23.0	23.9	26.8	30.7	31.6
77.5°	16.3	18.2	21.1	23.9	25.9
80°	11.5	12.5	14.4	18.2	19.2
82.5°	6.7	7.7	9.6	12.5	13.4
85°	1.9	2.9	3.8	6.7	8.6
87.5°	0.0	0.0	0.0	1.9	3.8
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	14.49	15.88	14.85	16.19	16.51	14.66	16.06	15.03	16.37	16.69
	3H	15.62	16.86	16.00	17.19	17.55	16.12	17.37	16.50	17.70	18.06
	4H	15.97	17.13	16.37	17.48	17.86	16.67	17.83	17.07	18.18	18.56
	6H	16.15	17.22	16.57	17.59	17.99	17.08	18.15	17.49	18.52	18.91
	8H	16.18	17.20	16.61	17.59	17.99	17.21	18.22	17.64	18.61	19.02
	12H	16.17	17.14	16.60	17.52	17.95	17.29	18.26	17.72	18.64	19.07
4H	2H	14.94	16.11	15.34	16.46	16.84	15.09	16.25	15.49	16.60	16.98
	3H	16.28	17.24	16.69	17.64	18.04	16.76	17.72	17.17	18.12	18.52
	4H	16.73	17.58	17.16	18.00	18.44	17.43	18.29	17.86	18.71	19.15
	6H	17.00	17.74	17.46	18.19	18.65	17.96	18.71	18.42	19.15	19.62
	8H	17.04	17.74	17.51	18.18	18.65	18.13	18.83	18.60	19.27	19.74
	12H	17.04	17.65	17.52	18.13	18.61	18.25	18.87	18.74	19.35	19.82
8H	4H	16.94	17.63	17.41	18.08	18.55	17.58	18.27	18.04	18.72	19.19
	6H	17.29	17.86	17.79	18.35	18.83	18.21	18.78	18.71	19.27	19.75
	8H	17.37	17.88	17.89	18.39	18.88	18.44	18.95	18.96	19.47	19.96
	12H	17.38	17.83	17.90	18.33	18.90	18.63	19.08	19.14	19.57	20.14
12H	4H	16.95	17.57	17.44	18.05	18.52	17.56	18.18	18.05	18.66	19.13
	6H	17.31	17.82	17.83	18.34	18.83	18.20	18.71	18.72	19.23	19.72
	8H	17.43	17.88	17.94	18.37	18.94	18.48	18.93	18.99	19.42	19.99