

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: P1058538

Luminaire Tested: S122RDR-H865D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058538  
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-H865D840-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: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

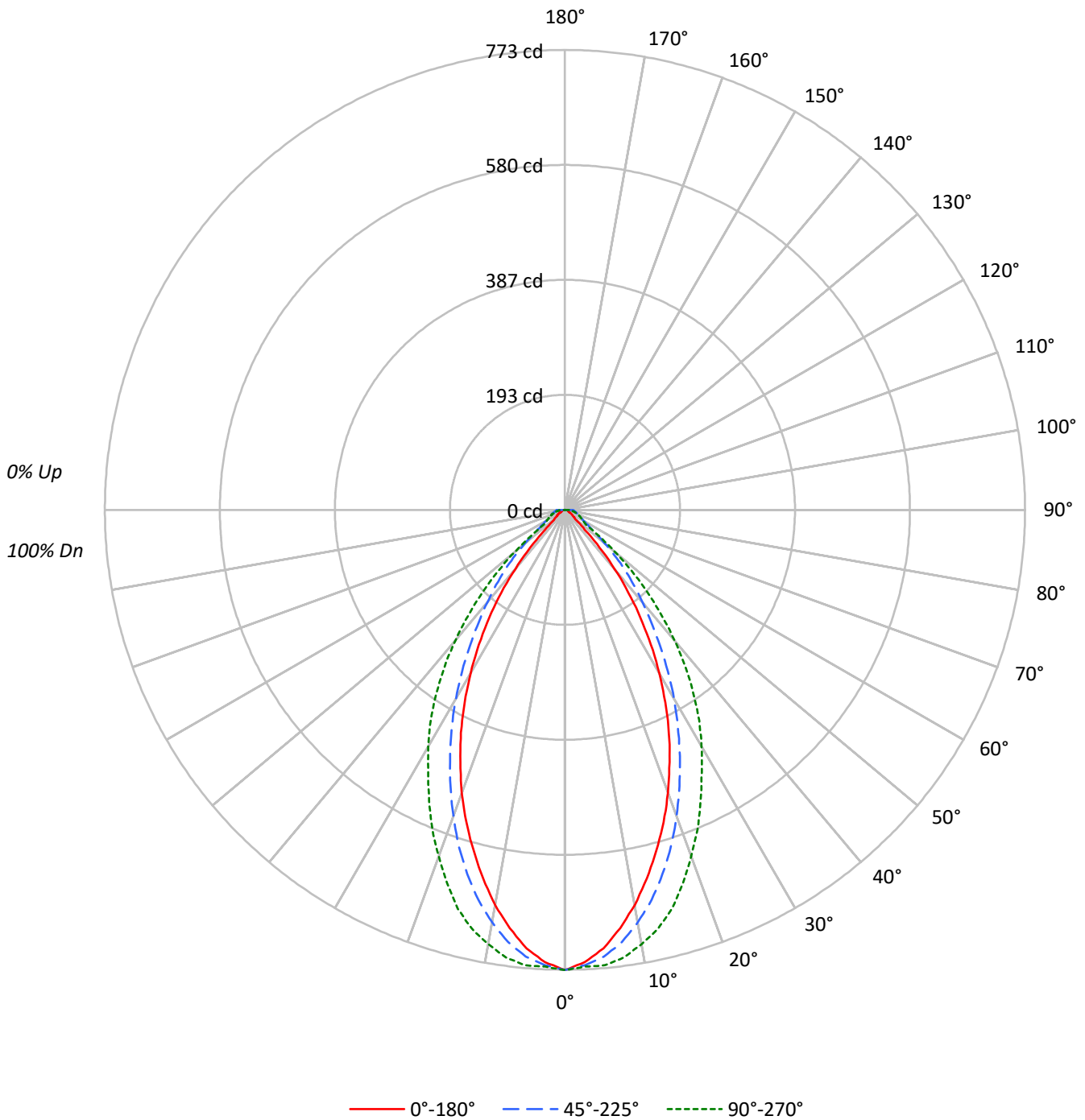
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 841.8 lumens  
Efficiency: N/A  
Efficacy: 27.0 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°	14271	14271	14271
5°	13707	13959	14235
10°	12636	13193	13888
15°	11323	12104	13262
20°	9938	10765	12175
25°	8415	9296	10984
30°	6750	7805	9782
35°	4990	6244	8474
40°	3129	4887	6887
45°	1226	3682	5102
50°	603	2486	3126
55°	476	1631	1393
60°	365	1325	1277
65°	271	1244	1244
70°	334	1268	1268
75°	349	1412	1326
80°	521	1838	1445
85°	1037	3133	2096

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 5753 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	8.4
10°-20°	178.6	21.2
20°-30°	213.6	25.4
30°-40°	179.8	21.4
40°-50°	102.4	12.2
50°-60°	40.4	4.8
60°-70°	25.4	3.0
70°-80°	18.9	2.2
80°-90°	12.0	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°	462.9	55.0
0°-40°	642.7	76.3
0°-60°	785.4	93.3
0°-90°	841.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	841.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	740	756	754	762	768	69
15°	593	614	634	671	694	165
25°	413	432	457	504	540	188
35°	222	241	277	337	376	137
45°	47	83	141	177	196	44
55°	15	32	51	52	43	13
65°	6	28	28	27	28	7
75°	5	20	20	19	19	5
85°	5	14	15	14	10	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	773.4	773.4	773.4	773.4	773.4
2.5°	761.0	774.7	766.0	767.2	768.5
5°	740.0	756.1	753.6	762.3	768.5
7.5°	709.1	726.4	732.6	747.4	758.6
10°	674.4	694.2	704.1	727.6	741.2
12.5°	634.8	657.1	671.9	701.6	721.4
15°	592.7	613.8	633.6	670.7	694.2
17.5°	550.7	571.7	592.7	633.6	658.3
20°	506.1	525.9	548.2	591.5	620.0
22.5°	459.1	480.1	502.4	547.0	581.6
25°	413.3	431.9	456.6	503.6	539.5
27.5°	365.1	383.6	410.8	459.1	497.5
30°	316.8	335.4	366.3	415.8	459.1
32.5°	268.5	288.3	321.7	376.2	419.5
35°	221.5	241.3	277.2	336.6	376.2
37.5°	175.7	198.0	237.6	295.8	332.9
40°	129.9	155.9	202.9	254.9	285.9
42.5°	86.6	118.8	170.8	214.1	240.1
45°	47.0	82.9	141.1	177.0	195.5
47.5°	26.0	53.2	112.6	141.1	152.2
50°	21.0	37.1	86.6	107.7	108.9
52.5°	17.3	33.4	64.3	76.7	70.5
55°	14.8	32.2	50.7	52.0	43.3
57.5°	12.4	30.9	42.1	37.1	37.1
60°	9.9	30.9	35.9	33.4	34.6
62.5°	7.4	30.9	32.2	29.7	30.9
65°	6.2	28.5	28.5	27.2	28.5
67.5°	6.2	26.0	26.0	24.7	26.0
70°	6.2	24.7	23.5	23.5	23.5
72.5°	4.9	22.3	22.3	21.0	21.0
75°	4.9	19.8	19.8	18.6	18.6
77.5°	4.9	18.6	18.6	17.3	16.1
80°	4.9	16.1	17.3	16.1	13.6
82.5°	4.9	14.8	16.1	14.8	11.1
85°	4.9	13.6	14.8	13.6	9.9
87.5°	3.7	13.6	13.6	11.1	7.4
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	6.92	8.14	7.29	8.45	8.77	8.95	10.17	9.31	10.48	10.80
	3H	8.47	9.55	8.85	9.88	10.25	10.92	12.01	11.30	12.34	12.70
	4H	9.02	10.03	9.42	10.38	10.77	11.84	12.85	12.24	13.20	13.59
	6H	9.57	10.50	9.99	10.88	11.27	12.72	13.65	13.14	14.02	14.42
	8H	9.86	10.74	10.30	11.14	11.54	13.12	14.00	13.55	14.39	14.80
	12H	10.22	11.06	10.65	11.44	11.88	13.56	14.41	14.00	14.79	15.22
4H	2H	8.11	9.12	8.52	9.48	9.86	9.57	10.58	9.97	10.93	11.32
	3H	10.31	11.15	10.73	11.55	11.96	11.81	12.65	12.23	13.05	13.46
	4H	11.36	12.11	11.80	12.53	12.98	12.89	13.64	13.32	14.06	14.50
	6H	12.26	12.91	12.72	13.35	13.82	14.00	14.65	14.46	15.09	15.56
	8H	12.64	13.25	13.11	13.70	14.17	14.52	15.12	14.99	15.57	16.04
	12H	13.06	13.59	13.55	14.08	14.55	15.09	15.63	15.58	16.11	16.59
8H	4H	12.17	12.77	12.64	13.22	13.69	13.38	13.99	13.85	14.43	14.91
	6H	13.55	14.05	14.05	14.54	15.03	14.78	15.27	15.28	15.77	16.25
	8H	14.26	14.71	14.79	15.23	15.72	15.51	15.96	16.04	16.48	16.97
	12H	15.01	15.40	15.53	15.90	16.47	16.34	16.74	16.86	17.23	17.81
12H	4H	12.33	12.87	12.82	13.35	13.82	13.48	14.02	13.97	14.50	14.97
	6H	13.88	14.33	14.40	14.84	15.34	14.99	15.44	15.52	15.96	16.45
	8H	14.79	15.19	15.31	15.68	16.25	15.88	16.27	16.39	16.77	17.34