

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



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055395

Luminaire Tested: S122R3DR-H865D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055395  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H865D850-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

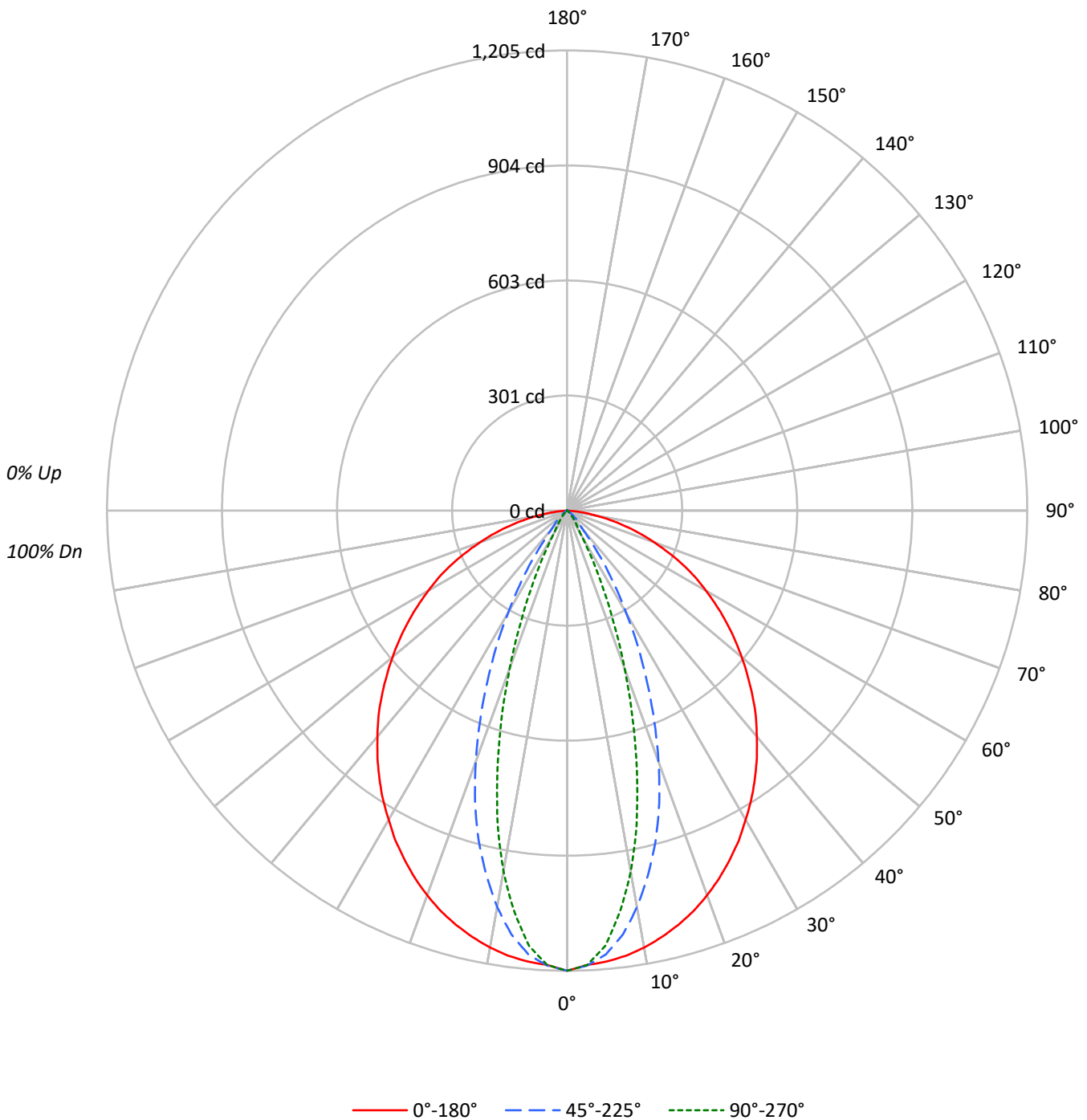
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1096.3 lumens  
Efficiency: N/A  
Efficacy: 35.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.9  
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	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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

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

	0°	45°	90°
0°	22828	22828	22828
5°	22546	22179	21757
10°	22355	20277	18465
15°	22031	17549	13828
20°	21613	14101	8851
25°	21078	10335	4545
30°	20453	6758	1485
35°	19828	3747	865
40°	19113	1506	480
45°	18404	1002	185
50°	17593	572	83
55°	16790	274	46
60°	15899	106	0
65°	14964	63	0
70°	13427	78	0
75°	11558	102	0
80°	8761	0	0
85°	3608	304	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18404 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.0	9.9
10°-20°	251.0	22.9
20°-30°	254.8	23.2
30°-40°	191.2	17.4
40°-50°	133.9	12.2
50°-60°	82.0	7.5
60°-70°	48.8	4.5
70°-80°	22.5	2.1
80°-90°	4.1	0.4
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°	613.8	56.0
0°-40°	805.0	73.4
0°-60°	1020.9	93.1
0°-90°	1096.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1096.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1205	1205	1205	1205	1205	
5°	1186	1197	1166	1144	1144	112
15°	1123	1062	895	758	705	316
25°	1008	831	494	282	217	464
35°	857	558	162	48	37	536
45°	687	295	37	11	7	529
55°	508	90	8	3	1	454
65°	334	26	1	1	0	329
75°	158	3	1	1	0	168
85°	17	0	1	1	0	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1204.9	1204.9	1204.9	1204.9	1204.9
2.5°	1191.1	1209.1	1192.5	1189.7	1191.1
5°	1185.5	1196.6	1166.2	1144.0	1144.0
7.5°	1175.8	1175.8	1119.1	1073.4	1059.5
10°	1162.0	1146.8	1054.0	980.6	959.8
12.5°	1144.0	1108.0	977.8	873.9	840.7
15°	1123.2	1062.3	894.7	757.6	705.0
17.5°	1099.7	1011.0	801.9	631.5	570.6
20°	1072.0	955.6	699.4	502.7	439.0
22.5°	1041.5	894.7	595.5	387.8	319.9
25°	1008.3	831.0	494.4	282.5	217.4
27.5°	973.6	764.5	401.6	193.9	133.0
30°	934.9	695.3	308.9	115.0	67.9
32.5°	897.5	628.8	231.3	62.3	49.9
35°	857.3	558.1	162.0	48.5	37.4
37.5°	815.8	491.7	99.7	36.0	27.7
40°	772.8	423.8	60.9	26.3	19.4
42.5°	731.3	360.1	48.5	18.0	12.5
45°	686.9	295.0	37.4	11.1	6.9
47.5°	641.2	235.4	27.7	6.9	4.2
50°	596.9	182.8	19.4	4.2	2.8
52.5°	552.6	134.3	12.5	2.8	1.4
55°	508.3	90.0	8.3	2.8	1.4
57.5°	464.0	63.7	5.5	1.4	1.4
60°	419.6	49.9	2.8	1.4	0.0
62.5°	378.1	38.8	2.8	1.4	1.4
65°	333.8	26.3	1.4	1.4	0.0
67.5°	286.7	16.6	1.4	1.4	0.0
70°	242.4	9.7	1.4	1.4	0.0
72.5°	199.4	5.5	1.4	1.4	0.0
75°	157.9	2.8	1.4	1.4	0.0
77.5°	117.7	1.4	0.0	1.4	0.0
80°	80.3	0.0	0.0	1.4	0.0
82.5°	47.1	0.0	0.0	1.4	0.0
85°	16.6	0.0	1.4	1.4	0.0
87.5°	0.0	0.0	1.4	1.4	0.0
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	17.08	18.34	17.44	18.65	18.97	0.00	0.00	0.00	0.00	0.00
	3H	20.82	21.94	21.20	22.27	22.63	0.00	0.00	0.00	0.00	0.00
	4H	22.13	23.17	22.53	23.52	23.91	0.00	0.00	0.00	0.00	0.00
	6H	22.99	23.94	23.40	24.31	24.71	0.00	0.00	0.00	0.00	0.00
	8H	23.20	24.10	23.63	24.49	24.90	0.00	0.00	0.00	0.00	0.00
	12H	23.26	24.13	23.70	24.51	24.94	0.00	0.00	0.00	0.00	0.00
4H	2H	16.83	17.87	17.24	18.22	18.61	0.00	0.00	0.00	0.00	0.00
	3H	20.57	21.43	20.99	21.83	22.24	0.00	0.00	0.00	0.00	0.00
	4H	21.87	22.63	22.31	23.05	23.50	0.00	0.00	0.00	0.00	0.00
	6H	22.79	23.44	23.25	23.89	24.36	0.00	0.00	0.00	0.00	0.00
	8H	23.05	23.66	23.52	24.11	24.58	0.00	0.00	0.00	0.00	0.00
	12H	23.15	23.69	23.64	24.17	24.65	0.00	0.00	0.00	0.00	0.00
8H	4H	21.73	22.34	22.20	22.79	23.26	0.00	0.00	0.00	0.00	0.00
	6H	22.63	23.12	23.13	23.62	24.10	0.00	0.00	0.00	0.00	0.00
	8H	22.88	23.33	23.41	23.84	24.34	0.00	0.00	0.00	0.00	0.00
	12H	23.00	23.39	23.52	23.89	24.46	0.00	0.00	0.00	0.00	0.00
12H	4H	21.68	22.21	22.16	22.70	23.17	0.00	0.00	0.00	0.00	0.00
	6H	22.56	23.01	23.09	23.52	24.02	0.00	0.00	0.00	0.00	0.00
	8H	22.84	23.23	23.36	23.72	24.30	0.00	0.00	0.00	0.00	0.00