

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: P1055151

Luminaire Tested: S122R3DR-S1005D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055151  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S1005D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

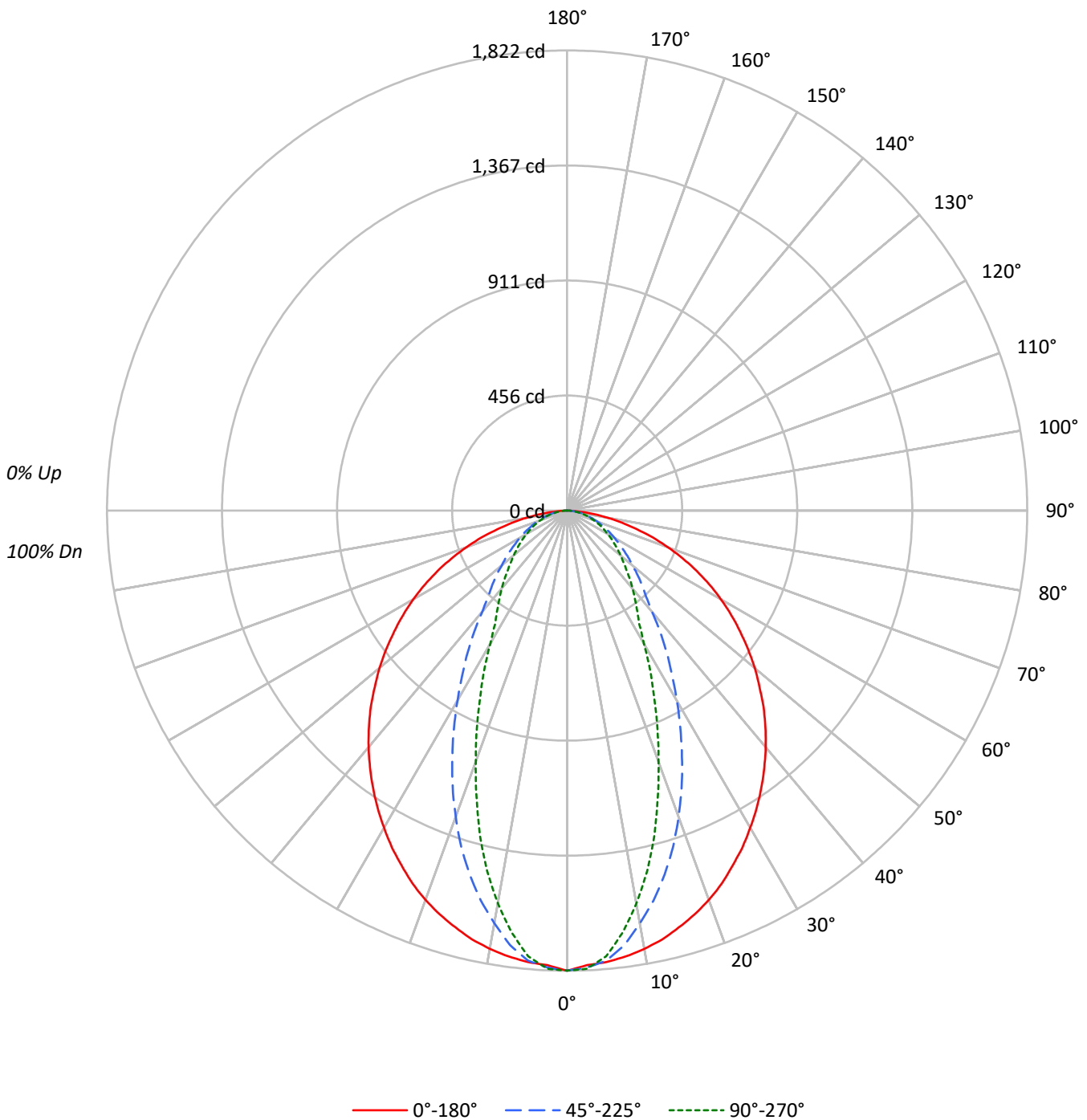
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2755.2 lumens  
Efficiency: N/A  
Efficacy: 65.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	34510	34510	34510
5°	34121	34005	33687
10°	33899	31908	30385
15°	33517	29245	26140
20°	33071	26009	21341
25°	32410	22479	17033
30°	31719	18991	13295
35°	30999	15887	11166
40°	30247	12883	9945
45°	29462	11264	8895
50°	28596	9965	8126
55°	27617	9004	7548
60°	26661	8196	7040
65°	25401	7509	6621
70°	23537	7002	6243
75°	20848	6354	5907
80°	17784	5979	5488
85°	12260	5304	4956

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 29462 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.9	6.1
10°-20°	421.4	15.3
20°-30°	519.3	18.8
30°-40°	498.2	18.1
40°-50°	429.8	15.6
50°-60°	333.4	12.1
60°-70°	228.3	8.3
70°-80°	124.0	4.5
80°-90°	34.0	1.2
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°	1107.6	40.2
0°-40°	1605.9	58.3
0°-60°	2369.0	86.0
0°-90°	2755.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2755.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1822	1822	1822	1822	1822	
5°	1794	1820	1788	1765	1771	170
15°	1709	1657	1491	1369	1333	482
25°	1550	1384	1075	877	815	715
35°	1340	1063	687	512	483	838
45°	1100	740	420	347	332	847
55°	836	445	273	236	228	748
65°	567	242	168	152	148	559
75°	285	111	87	82	81	305
85°	56	27	24	24	23	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1821.5	1821.5	1821.5	1821.5	1821.5
2.5°	1801.7	1832.2	1810.9	1810.9	1815.5
5°	1794.1	1820.0	1788.0	1765.2	1771.3
7.5°	1780.4	1798.7	1734.7	1686.0	1684.5
10°	1762.1	1763.7	1658.6	1594.6	1579.4
12.5°	1739.3	1714.9	1580.9	1485.0	1462.1
15°	1708.8	1657.1	1491.0	1369.2	1332.7
17.5°	1676.9	1597.7	1395.1	1242.8	1192.5
20°	1640.3	1526.1	1290.0	1116.4	1058.5
22.5°	1599.2	1457.5	1184.9	994.5	933.6
25°	1550.4	1384.4	1075.3	877.3	814.8
27.5°	1503.2	1309.8	970.2	773.7	709.7
30°	1449.9	1229.1	868.1	674.7	607.7
32.5°	1396.6	1146.8	773.7	580.3	530.0
35°	1340.3	1063.1	686.9	511.7	482.8
37.5°	1282.4	980.8	604.6	466.0	440.2
40°	1223.0	898.6	520.9	421.9	402.1
42.5°	1162.1	817.9	463.0	385.3	367.1
45°	1099.6	740.2	420.4	347.3	332.0
47.5°	1032.6	662.5	379.2	315.3	301.6
50°	970.2	587.9	338.1	286.3	275.7
52.5°	903.2	514.8	304.6	260.4	251.3
55°	836.1	444.7	272.6	236.1	228.5
57.5°	770.7	377.7	242.2	213.2	207.1
60°	703.6	324.4	216.3	191.9	185.8
62.5°	635.1	281.8	191.9	172.1	166.0
65°	566.6	242.2	167.5	152.3	147.7
67.5°	495.0	204.1	146.2	134.0	131.0
70°	424.9	170.6	126.4	115.8	112.7
72.5°	356.4	138.6	106.6	99.0	96.0
75°	284.8	111.2	86.8	82.2	80.7
77.5°	222.4	86.8	70.1	67.0	65.5
80°	163.0	64.0	54.8	51.8	50.3
82.5°	108.1	44.2	39.6	38.1	36.6
85°	56.4	27.4	24.4	24.4	22.8
87.5°	18.3	12.2	12.2	12.2	10.7
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	21.91	23.38	22.28	23.69	24.01	16.72	18.19	17.08	18.50	18.81
	3H	24.24	25.56	24.62	25.89	26.25	18.37	19.68	18.74	20.01	20.37
	4H	25.14	26.37	25.54	26.72	27.10	19.00	20.23	19.40	20.58	20.96
	6H	25.80	26.94	26.21	27.31	27.70	19.49	20.63	19.91	21.00	21.39
	8H	26.01	27.09	26.44	27.48	27.88	19.66	20.75	20.09	21.14	21.54
	12H	26.12	27.16	26.55	27.54	27.97	19.78	20.82	20.21	21.20	21.63
4H	2H	21.93	23.16	22.33	23.51	23.89	17.43	18.67	17.83	19.02	19.40
	3H	24.34	25.37	24.75	25.77	26.17	19.28	20.31	19.69	20.71	21.11
	4H	25.27	26.19	25.70	26.61	27.05	20.03	20.95	20.46	21.37	21.81
	6H	26.05	26.85	26.51	27.29	27.76	20.64	21.45	21.10	21.89	22.35
	8H	26.32	27.07	26.78	27.51	27.98	20.86	21.61	21.32	22.05	22.52
	12H	26.50	27.16	26.98	27.64	28.12	21.02	21.69	21.50	22.17	22.64
8H	4H	25.26	26.01	25.73	26.46	26.93	20.41	21.16	20.87	21.60	22.07
	6H	26.07	26.69	26.57	27.18	27.66	21.15	21.76	21.64	22.26	22.73
	8H	26.37	26.93	26.89	27.44	27.93	21.44	21.99	21.96	22.51	22.99
	12H	26.60	27.09	27.11	27.59	28.15	21.69	22.17	22.20	22.67	23.23
12H	4H	25.24	25.91	25.73	26.39	26.86	20.46	21.13	20.95	21.61	22.08
	6H	26.05	26.60	26.56	27.11	27.60	21.23	21.79	21.75	22.30	22.79
	8H	26.38	26.87	26.89	27.36	27.93	21.59	22.08	22.10	22.57	23.14