

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: P1055982

Luminaire Tested: S124R3DR-S1195D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055982  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1195D830-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

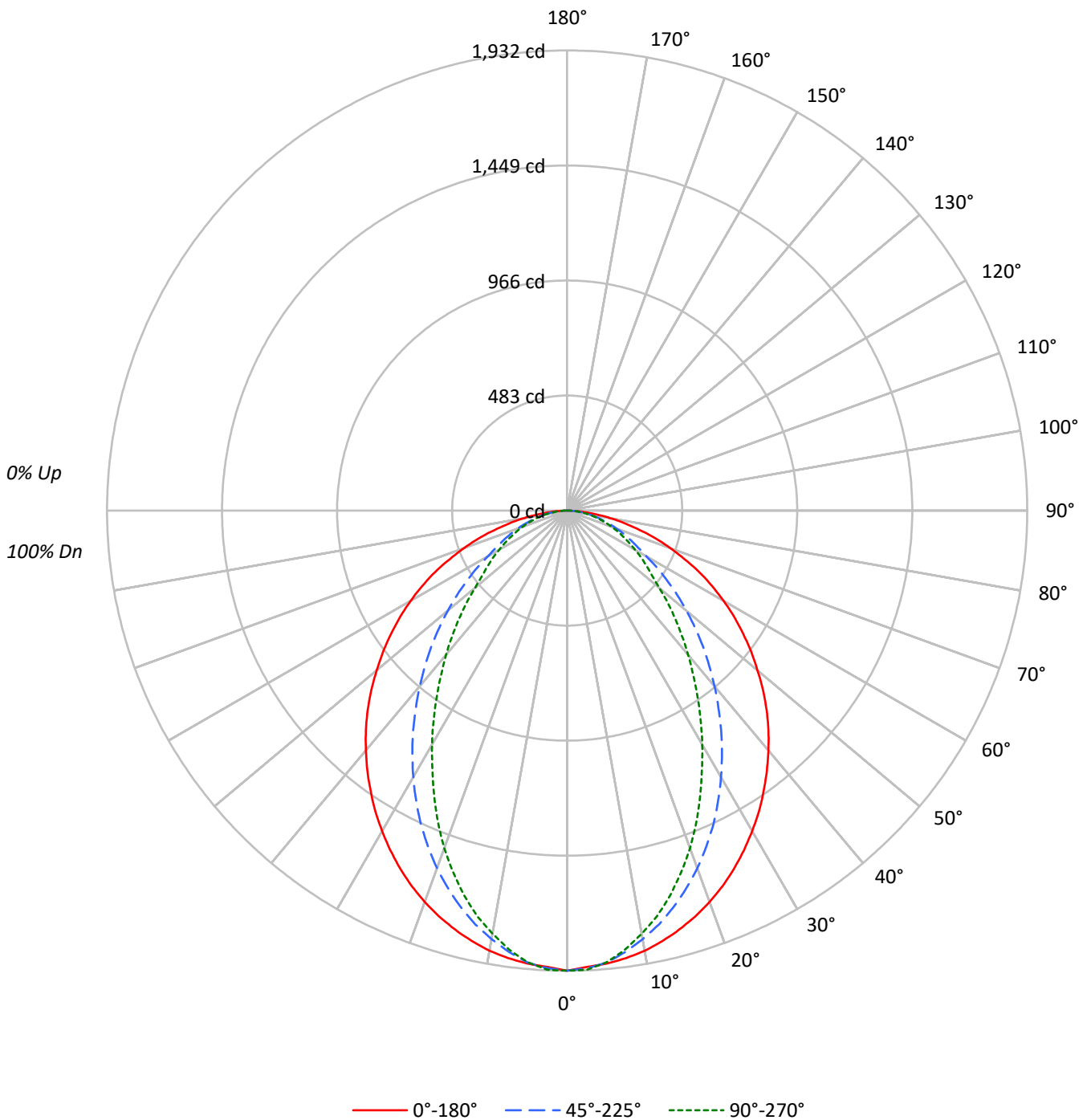
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3847.7 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76					73				
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

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

	0°	45°	90°
0°	17080	17080	17080
5°	16944	16905	16893
10°	16846	16399	16195
15°	16667	15783	15302
20°	16450	15033	14190
25°	16183	14173	12897
30°	15862	13191	11581
35°	15527	12166	10310
40°	15176	11108	9122
45°	14806	10078	8016
50°	14352	8994	6921
55°	13915	7911	6289
60°	13423	6787	5832
65°	12818	6157	5441
70°	11907	5695	5144
75°	10781	5244	4858
80°	9409	4847	4562
85°	7213	4474	4179

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14806 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.9	4.7
10°-20°	487.9	12.7
20°-30°	675.5	17.6
30°-40°	725.0	18.8
40°-50°	659.4	17.1
50°-60°	519.2	13.5
60°-70°	355.4	9.2
70°-80°	191.3	5.0
80°-90°	54.2	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°	1343.2	34.9
0°-40°	2068.3	53.8
0°-60°	3246.9	84.4
0°-90°	3847.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3847.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1932	1932	1932	1932	1932	
5°	1909	1930	1905	1895	1903	181
15°	1821	1801	1724	1677	1672	513
25°	1659	1591	1453	1348	1322	764
35°	1439	1326	1127	991	955	900
45°	1184	1033	806	667	641	913
55°	903	731	513	414	408	807
65°	613	438	294	262	260	605
75°	316	192	154	141	142	337
85°	71	48	44	41	41	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1931.8	1931.8	1931.8	1931.8	1931.8
2.5°	1917.6	1940.3	1923.3	1926.1	1929.0
5°	1909.1	1930.4	1904.8	1894.9	1903.4
7.5°	1894.9	1909.1	1869.3	1850.8	1859.3
10°	1876.4	1879.2	1826.6	1799.6	1803.9
12.5°	1850.8	1843.7	1779.7	1741.3	1744.2
15°	1820.9	1801.0	1724.3	1677.4	1671.7
17.5°	1786.8	1754.1	1663.2	1603.5	1592.1
20°	1748.4	1704.4	1597.8	1521.0	1508.2
22.5°	1705.8	1648.9	1526.7	1435.7	1417.2
25°	1658.9	1590.7	1452.8	1347.6	1322.0
27.5°	1607.7	1528.1	1373.2	1258.0	1225.3
30°	1553.7	1462.7	1292.1	1168.5	1134.4
32.5°	1498.3	1395.9	1209.7	1078.9	1043.4
35°	1438.6	1326.3	1127.2	990.8	955.2
37.5°	1377.4	1253.8	1043.4	905.5	868.5
40°	1314.9	1181.3	962.4	820.2	790.4
42.5°	1250.9	1107.3	882.8	740.6	713.6
45°	1184.1	1033.4	806.0	666.7	641.1
47.5°	1115.9	958.1	727.8	597.0	572.9
50°	1043.4	882.8	653.9	528.8	503.2
52.5°	973.7	806.0	582.8	462.0	449.2
55°	902.7	730.7	513.2	413.7	408.0
57.5°	831.6	655.3	449.2	375.3	369.6
60°	759.1	581.4	383.8	335.5	329.8
62.5°	686.6	508.9	335.5	297.1	294.3
65°	612.7	437.8	294.3	261.6	260.1
67.5°	534.5	369.6	257.3	230.3	228.9
70°	460.6	301.4	220.3	199.0	199.0
72.5°	390.9	238.8	186.2	169.2	169.2
75°	315.6	191.9	153.5	140.7	142.2
77.5°	248.8	150.7	123.7	115.1	115.1
80°	184.8	112.3	95.2	88.1	89.6
82.5°	125.1	78.2	68.2	64.0	64.0
85°	71.1	48.3	44.1	41.2	41.2
87.5°	25.6	22.7	21.3	18.5	19.9
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	21.00	22.53	21.37	22.84	23.15	16.78	18.30	17.14	18.62	18.93
	3H	22.78	24.15	23.15	24.47	24.84	18.39	19.76	18.77	20.09	20.45
	4H	23.45	24.73	23.85	25.08	25.46	19.02	20.31	19.42	20.66	21.04
	6H	23.96	25.15	24.37	25.51	25.90	19.52	20.71	19.93	21.08	21.47
	8H	24.12	25.25	24.55	25.64	26.04	19.69	20.82	20.12	21.21	21.61
	12H	24.22	25.30	24.65	25.69	26.12	19.81	20.90	20.24	21.28	21.71
4H	2H	21.10	22.38	21.50	22.73	23.11	17.50	18.78	17.90	19.13	19.51
	3H	23.04	24.11	23.45	24.51	24.91	19.31	20.38	19.72	20.77	21.18
	4H	23.80	24.76	24.23	25.18	25.61	20.04	21.01	20.47	21.42	21.86
	6H	24.43	25.27	24.89	25.71	26.17	20.66	21.50	21.12	21.94	22.40
	8H	24.65	25.44	25.11	25.88	26.35	20.87	21.66	21.34	22.10	22.57
	12H	24.81	25.51	25.29	25.99	26.46	21.04	21.74	21.52	22.22	22.69
8H	4H	23.85	24.64	24.32	25.08	25.55	20.43	21.22	20.89	21.66	22.13
	6H	24.55	25.20	25.05	25.69	26.17	21.16	21.81	21.66	22.30	22.78
	8H	24.82	25.40	25.34	25.91	26.40	21.45	22.03	21.96	22.54	23.03
	12H	25.04	25.55	25.55	26.05	26.61	21.70	22.21	22.21	22.70	23.27
12H	4H	23.85	24.55	24.33	25.03	25.50	20.49	21.19	20.97	21.67	22.14
	6H	24.55	25.13	25.06	25.64	26.13	21.24	21.83	21.76	22.34	22.83
	8H	24.86	25.37	25.36	25.86	26.43	21.59	22.11	22.10	22.60	23.17