

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: P1055984

Luminaire Tested: S124R3DR-S1195D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055984  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1195D835-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

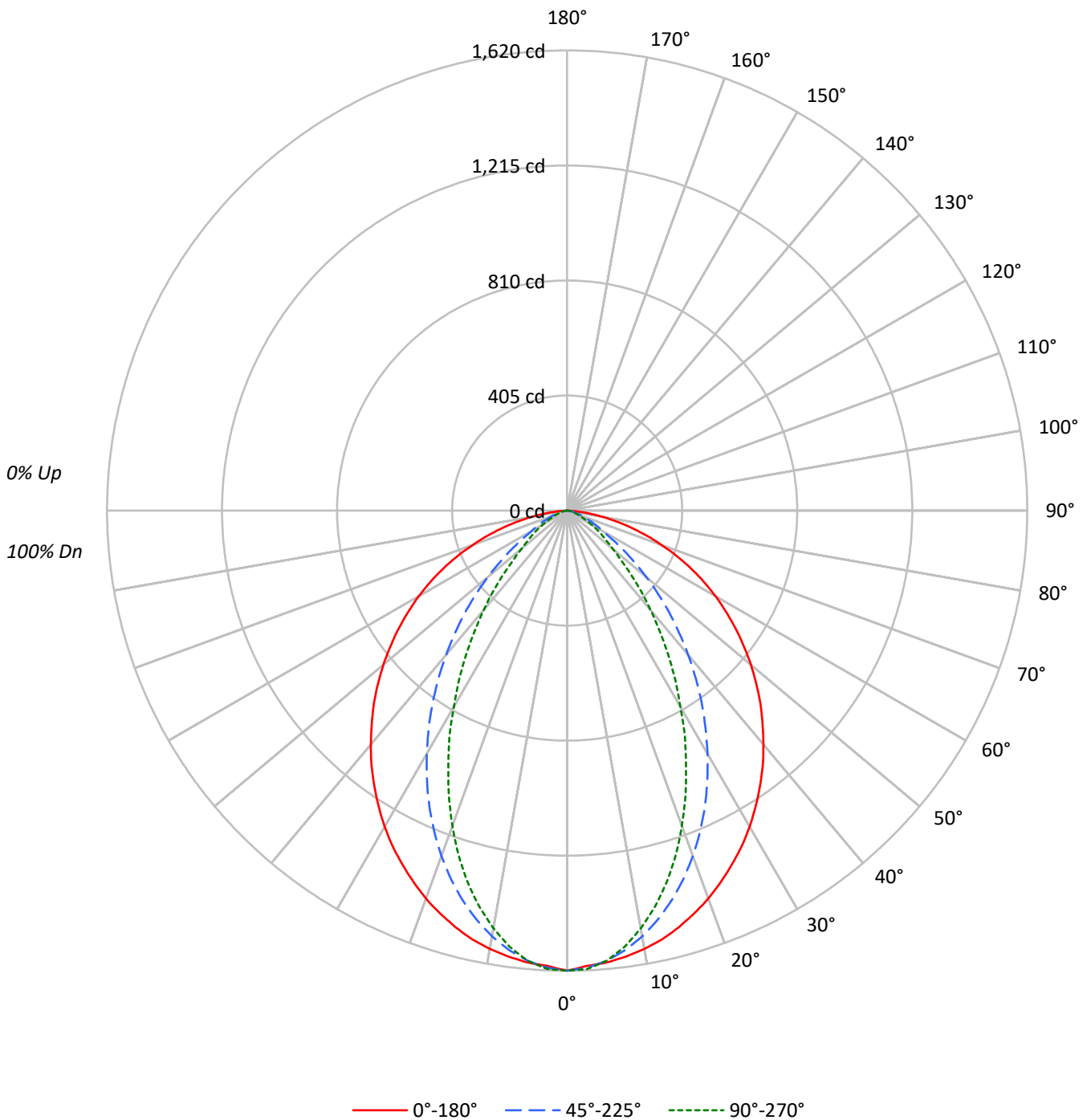
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2619.1 lumens  
Efficiency: N/A  
Efficacy: 62.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03  
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 (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	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	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

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

	0°	45°	90°
0°	14321	14321	14321
5°	14175	14121	14121
10°	14068	13661	13405
15°	13901	13004	12396
20°	13679	12175	11111
25°	13403	11196	9651
30°	13118	10085	8130
35°	12778	8904	6691
40°	12411	7642	5275
45°	12031	6354	3941
50°	11617	5000	2883
55°	11159	3696	2301
60°	10668	2560	1759
65°	10033	1987	1293
70°	9084	1404	1013
75°	7935	980	772
80°	6375	769	692
85°	3520	609	609

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12031 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.2	5.7
10°-20°	401.4	15.3
20°-30°	535.4	20.4
30°-40°	539.1	20.6
40°-50°	442.1	16.9
50°-60°	302.2	11.5
60°-70°	168.9	6.4
70°-80°	67.0	2.6
80°-90°	12.7	0.5
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°	1087.1	41.5
0°-40°	1626.2	62.1
0°-60°	2370.5	90.5
0°-90°	2619.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2619.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1597	1615	1591	1584	1591	152
15°	1519	1502	1421	1371	1354	428
25°	1374	1306	1148	1032	989	633
35°	1184	1059	825	668	620	740
45°	962	786	508	357	315	742
55°	724	508	240	160	149	647
65°	480	241	95	68	62	474
75°	232	63	29	24	23	249
85°	35	6	6	6	6	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1619.8	1619.8	1619.8	1619.8	1619.8
2.5°	1604.7	1624.3	1610.7	1612.2	1615.2
5°	1597.1	1615.2	1591.1	1583.6	1591.1
7.5°	1583.6	1597.1	1560.9	1545.9	1548.9
10°	1567.0	1571.5	1521.7	1496.1	1493.1
12.5°	1545.9	1539.8	1475.0	1437.3	1428.2
15°	1518.7	1502.1	1420.7	1370.9	1354.3
17.5°	1487.0	1458.4	1360.4	1295.5	1271.4
20°	1453.9	1411.6	1294.0	1211.0	1180.9
22.5°	1414.6	1361.9	1223.1	1122.1	1087.4
25°	1373.9	1306.1	1147.7	1031.6	989.3
27.5°	1331.7	1248.8	1069.3	939.6	897.4
30°	1284.9	1186.9	987.8	847.6	796.3
32.5°	1235.2	1123.6	906.4	757.1	708.8
35°	1183.9	1058.7	825.0	668.1	619.9
37.5°	1131.1	992.4	743.5	583.7	535.4
40°	1075.3	924.5	662.1	503.7	457.0
42.5°	1018.0	855.1	583.7	428.3	384.6
45°	962.2	785.7	508.2	357.4	315.2
47.5°	903.4	716.4	434.3	291.1	254.9
50°	844.6	647.0	363.5	233.8	209.6
52.5°	784.2	577.6	298.6	191.5	174.9
55°	723.9	508.2	239.8	159.9	149.3
57.5°	663.6	438.9	185.5	135.7	123.7
60°	603.3	371.0	144.8	110.1	99.5
62.5°	541.4	303.1	119.1	87.5	78.4
65°	479.6	241.3	95.0	67.9	61.8
67.5°	417.8	184.0	72.4	52.8	48.3
70°	351.4	131.2	54.3	40.7	39.2
72.5°	294.1	89.0	39.2	31.7	30.2
75°	232.3	63.3	28.7	24.1	22.6
77.5°	179.5	40.7	21.1	19.6	18.1
80°	125.2	22.6	15.1	13.6	13.6
82.5°	76.9	12.1	10.6	9.0	9.0
85°	34.7	6.0	6.0	6.0	6.0
87.5°	6.0	3.0	3.0	3.0	3.0
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	19.97	21.38	20.34	21.69	22.01	11.06	12.47	11.43	12.78	13.10
	3H	21.56	22.81	21.94	23.14	23.50	11.65	12.90	12.03	13.23	13.60
	4H	22.15	23.32	22.55	23.67	24.05	11.81	12.98	12.21	13.33	13.71
	6H	22.58	23.66	23.00	24.03	24.42	11.92	12.99	12.33	13.36	13.75
	8H	22.70	23.72	23.13	24.11	24.51	11.94	12.96	12.37	13.35	13.75
	12H	22.74	23.72	23.17	24.10	24.53	11.94	12.92	12.38	13.30	13.73
4H	2H	19.83	20.99	20.23	21.34	21.73	11.64	12.81	12.05	13.16	13.54
	3H	21.47	22.43	21.89	22.83	23.24	12.36	13.32	12.77	13.72	14.12
	4H	22.08	22.94	22.51	23.36	23.80	12.56	13.42	12.99	13.84	14.28
	6H	22.57	23.31	23.03	23.76	24.22	12.73	13.47	13.19	13.91	14.38
	8H	22.71	23.41	23.18	23.85	24.32	12.76	13.45	13.23	13.90	14.37
	12H	22.79	23.40	23.27	23.88	24.36	12.78	13.40	13.27	13.88	14.35
8H	4H	21.97	22.66	22.44	23.11	23.58	12.83	13.52	13.30	13.97	14.44
	6H	22.45	23.02	22.95	23.52	23.99	13.04	13.60	13.54	14.10	14.58
	8H	22.60	23.11	23.12	23.62	24.11	13.09	13.60	13.61	14.11	14.61
	12H	22.69	23.14	23.20	23.63	24.20	13.15	13.60	13.66	14.09	14.66
12H	4H	21.93	22.55	22.42	23.03	23.50	12.86	13.47	13.34	13.95	14.43
	6H	22.40	22.91	22.92	23.42	23.91	13.07	13.57	13.58	14.09	14.58
	8H	22.56	23.01	23.08	23.51	24.07	13.16	13.61	13.67	14.10	14.67