

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: P1055958

Luminaire Tested: S124R3DR-S1020D835-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055958  
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-S1020D835-X4F0-XX-UDD-FLL-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

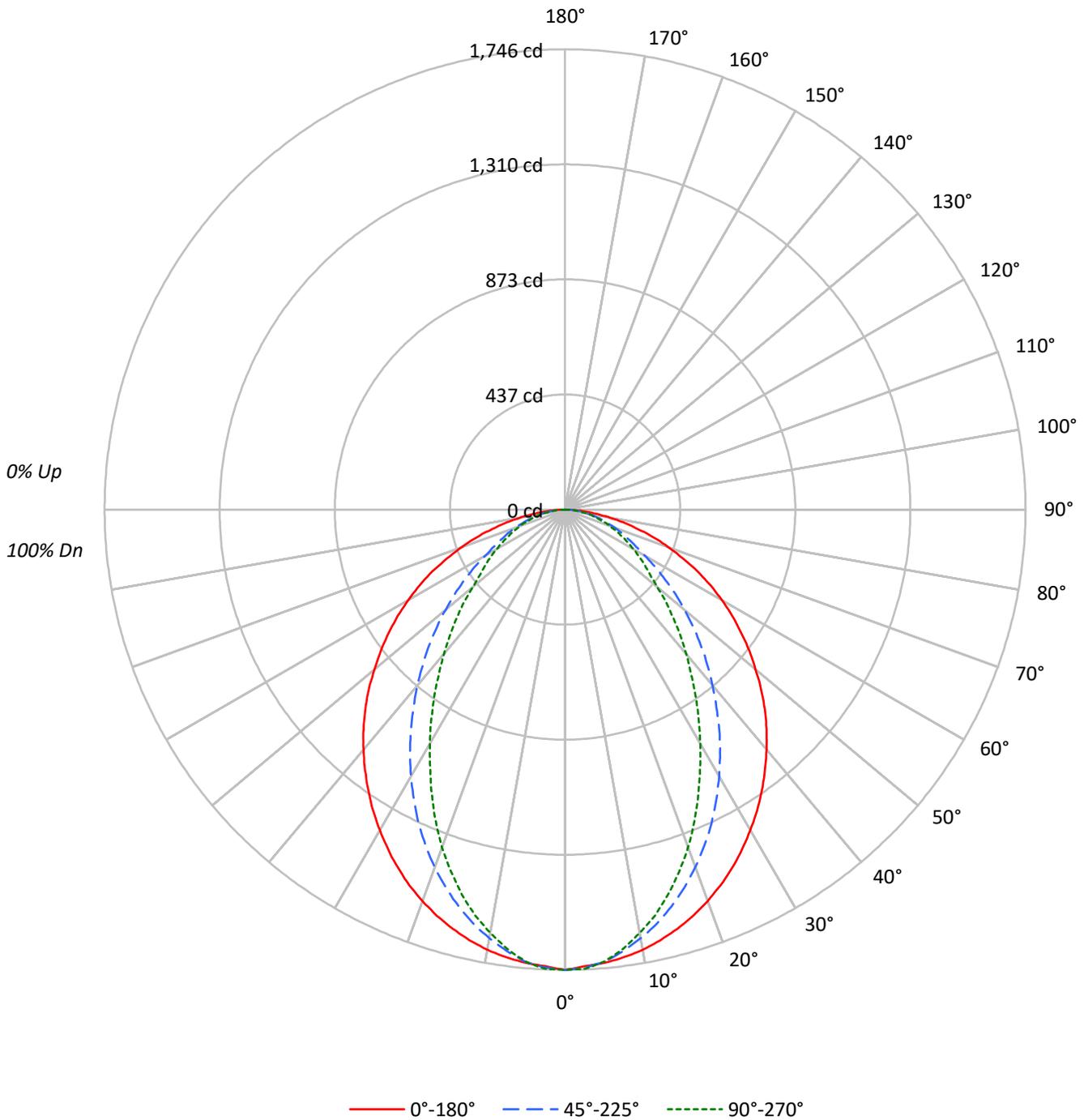
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3478.4 lumens  
Efficiency: N/A  
Efficacy: 100.2 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): 34.7  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	15441	15441	15441
5°	15317	15283	15271
10°	15229	14825	14640
15°	15068	14268	13832
20°	14872	13590	12829
25°	14630	12812	11659
30°	14340	11925	10469
35°	14037	10999	9321
40°	13719	10041	8246
45°	13385	9110	7247
50°	12973	8130	6257
55°	12578	7151	5685
60°	12134	6136	5271
65°	11588	5565	4920
70°	10764	5149	4650
75°	9746	4741	4390
80°	8508	4384	4124
85°	6523	4037	3784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13385 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.6	4.7
10°-20°	441.0	12.7
20°-30°	610.7	17.6
30°-40°	655.4	18.8
40°-50°	596.1	17.1
50°-60°	469.4	13.5
60°-70°	321.3	9.2
70°-80°	172.9	5.0
80°-90°	49.0	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°	1214.3	34.9
0°-40°	1869.8	53.8
0°-60°	2935.2	84.4
0°-90°	3478.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3478.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1746	1746	1746	1746	1746	
5°	1726	1745	1722	1713	1721	164
15°	1646	1628	1559	1516	1511	464
25°	1500	1438	1313	1218	1195	690
35°	1300	1199	1019	896	864	814
45°	1070	934	729	603	580	825
55°	816	660	464	374	369	730
65°	554	396	266	236	235	546
75°	285	174	139	127	128	305
85°	64	44	40	37	37	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1746.4	1746.4	1746.4	1746.4	1746.4
2.5°	1733.6	1754.1	1738.7	1741.3	1743.8
5°	1725.8	1745.1	1722.0	1713.0	1720.7
7.5°	1713.0	1725.8	1689.9	1673.2	1680.9
10°	1696.3	1698.9	1651.3	1626.9	1630.7
12.5°	1673.2	1666.7	1608.9	1574.2	1576.8
15°	1646.2	1628.2	1558.8	1516.4	1511.2
17.5°	1615.3	1585.8	1503.5	1449.6	1439.3
20°	1580.6	1540.8	1444.4	1375.0	1363.5
22.5°	1542.1	1490.7	1380.2	1297.9	1281.2
25°	1499.7	1438.0	1313.3	1218.2	1195.1
27.5°	1453.4	1381.4	1241.4	1137.3	1107.7
30°	1404.6	1322.3	1168.1	1056.3	1025.5
32.5°	1354.5	1261.9	1093.6	975.4	943.2
35°	1300.5	1199.0	1019.1	895.7	863.6
37.5°	1245.2	1133.4	943.2	818.6	785.2
40°	1188.7	1067.9	870.0	741.5	714.5
42.5°	1130.9	1001.1	798.0	669.5	645.1
45°	1070.5	934.2	728.6	602.7	579.6
47.5°	1008.8	866.1	658.0	539.7	517.9
50°	943.2	798.0	591.1	478.0	454.9
52.5°	880.3	728.6	526.9	417.6	406.1
55°	816.0	660.5	463.9	374.0	368.8
57.5°	751.8	592.4	406.1	339.3	334.1
60°	686.2	525.6	347.0	303.3	298.1
62.5°	620.7	460.1	303.3	268.6	266.0
65°	553.9	395.8	266.0	236.5	235.2
67.5°	483.2	334.1	232.6	208.2	206.9
70°	416.4	272.4	199.2	179.9	179.9
72.5°	353.4	215.9	168.3	152.9	152.9
75°	285.3	173.5	138.8	127.2	128.5
77.5°	224.9	136.2	111.8	104.1	104.1
80°	167.1	101.5	86.1	79.7	81.0
82.5°	113.1	70.7	61.7	57.8	57.8
85°	64.3	43.7	39.8	37.3	37.3
87.5°	23.1	20.6	19.3	16.7	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)