

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: P1055987

Luminaire Tested: S124R3DR-S1195D840-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055987  
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-S1195D840-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

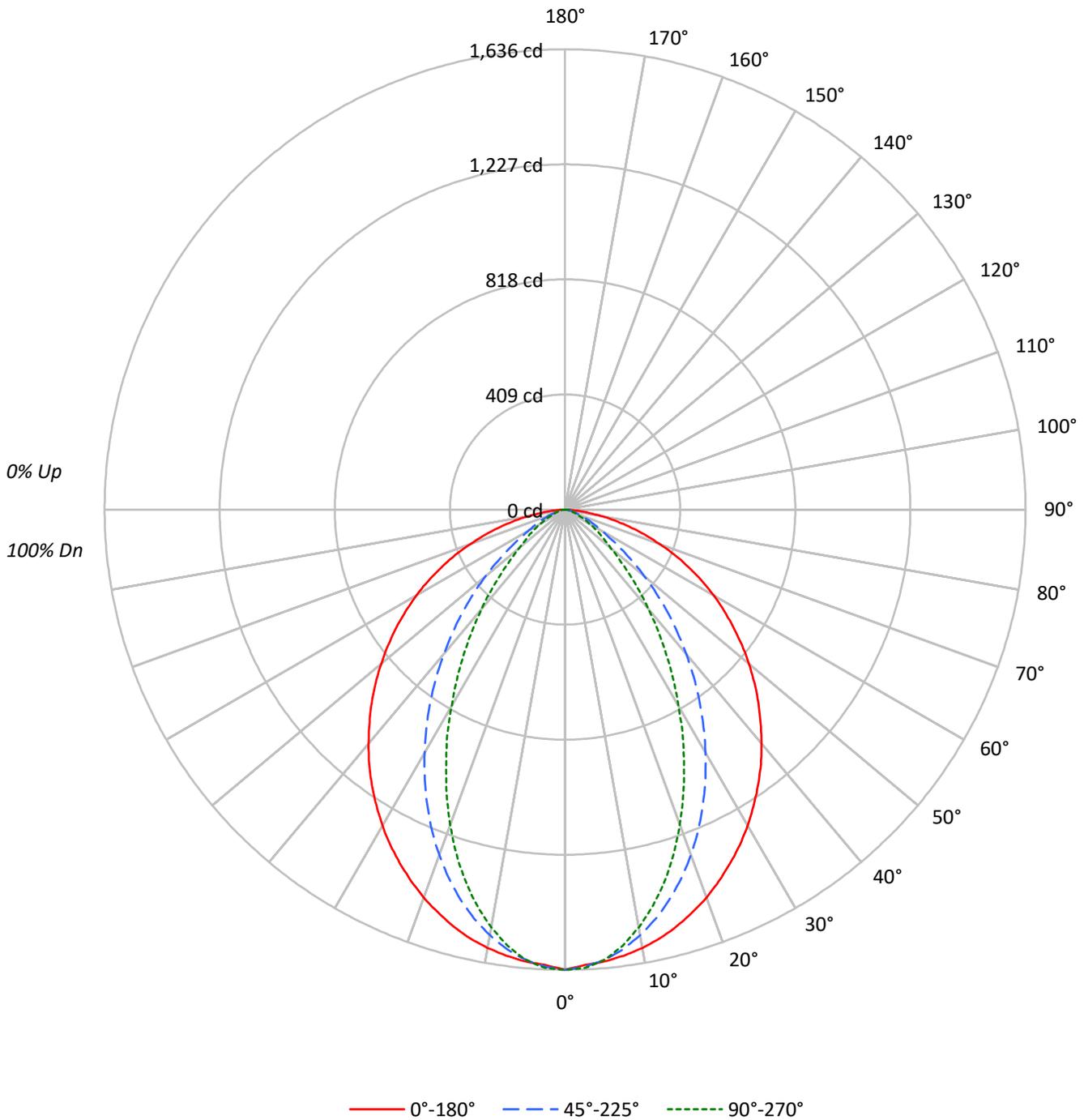
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2644.9 lumens  
Efficiency: N/A  
Efficacy: 63.1 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 (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	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°	14462	14462	14462
5°	14315	14261	14261
10°	14206	13796	13537
15°	14038	13132	12519
20°	13814	12295	11220
25°	13536	11306	9747
30°	13247	10185	8210
35°	12905	8992	6757
40°	12533	7717	5326
45°	12150	6418	3980
50°	11731	5049	2912
55°	11270	3733	2325
60°	10772	2585	1777
65°	10132	2008	1305
70°	9174	1417	1024
75°	8011	987	779
80°	6436	774	698
85°	3551	619	619

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12150 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.7	5.7
10°-20°	405.4	15.3
20°-30°	540.7	20.4
30°-40°	544.4	20.6
40°-50°	446.5	16.9
50°-60°	305.2	11.5
60°-70°	170.5	6.4
70°-80°	67.6	2.6
80°-90°	12.8	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°	1097.8	41.5
0°-40°	1642.3	62.1
0°-60°	2393.9	90.5
0°-90°	2644.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2644.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1613	1631	1607	1599	1607	153
15°	1534	1517	1435	1384	1368	432
25°	1388	1319	1159	1042	999	639
35°	1196	1069	833	675	626	748
45°	972	794	513	361	318	749
55°	731	513	242	161	151	654
65°	484	244	96	68	62	479
75°	234	64	29	24	23	251
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°	1635.7	1635.7	1635.7	1635.7	1635.7
2.5°	1620.5	1640.3	1626.6	1628.1	1631.2
5°	1612.9	1631.2	1606.8	1599.2	1606.8
7.5°	1599.2	1612.9	1576.3	1561.1	1564.2
10°	1582.4	1587.0	1536.7	1510.8	1507.8
12.5°	1561.1	1555.0	1489.5	1451.4	1442.3
15°	1533.7	1516.9	1434.7	1384.4	1367.7
17.5°	1501.7	1472.8	1373.8	1308.3	1283.9
20°	1468.2	1425.6	1306.8	1223.0	1192.5
22.5°	1428.6	1375.3	1235.2	1133.1	1098.1
25°	1387.5	1318.9	1159.0	1041.8	999.1
27.5°	1344.8	1261.1	1079.8	948.8	906.2
30°	1297.6	1198.6	997.6	855.9	804.2
32.5°	1247.4	1134.7	915.3	764.6	715.8
35°	1195.6	1069.2	833.1	674.7	626.0
37.5°	1142.3	1002.2	750.9	589.4	540.7
40°	1085.9	933.6	668.6	508.7	461.5
42.5°	1028.0	863.6	589.4	432.5	388.4
45°	971.7	793.5	513.3	361.0	318.3
47.5°	912.3	723.4	438.6	293.9	257.4
50°	852.9	653.4	367.1	236.1	211.7
52.5°	792.0	583.3	301.6	193.4	176.7
55°	731.1	513.3	242.2	161.4	150.8
57.5°	670.1	443.2	187.3	137.1	124.9
60°	609.2	374.7	146.2	111.2	100.5
62.5°	546.8	306.1	120.3	88.3	79.2
65°	484.3	243.7	96.0	68.5	62.4
67.5°	421.9	185.8	73.1	53.3	48.7
70°	354.9	132.5	54.8	41.1	39.6
72.5°	297.0	89.9	39.6	32.0	30.5
75°	234.5	64.0	28.9	24.4	22.8
77.5°	181.2	41.1	21.3	19.8	18.3
80°	126.4	22.8	15.2	13.7	13.7
82.5°	77.7	12.2	10.7	9.1	9.1
85°	35.0	6.1	6.1	6.1	6.1
87.5°	6.1	3.0	3.0	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)