

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: P1055961

Luminaire Tested: S124R3DR-S1020D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055961
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-S1020D840-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

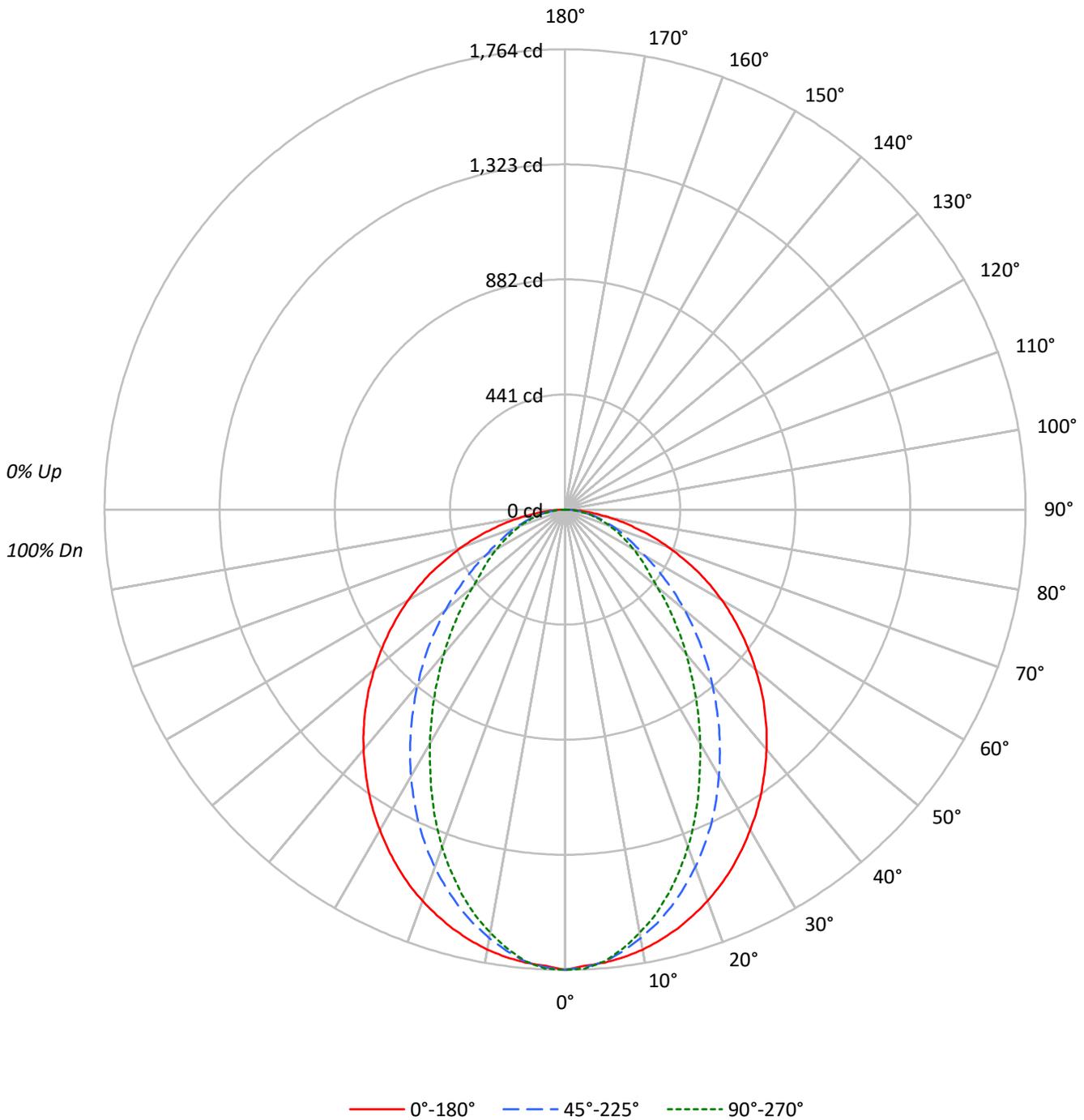
Lumens per Lamp: N/A
Luminaire Lumens: 3512.7 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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			86	
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73			73	
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63			63	
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55			55	
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49			49	
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43			43	
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39			39	
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35			35	
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32			32	
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29			29	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15593	15593	15593
5°	15468	15434	15422
10°	15379	14971	14785
15°	15216	14409	13969
20°	15018	13725	12955
25°	14775	12939	11774
30°	14481	12044	10573
35°	14175	11107	9413
40°	13855	10140	8327
45°	13516	9200	7318
50°	13101	8212	6319
55°	12703	7222	5742
60°	12254	6196	5324
65°	11701	5619	4969
70°	10870	5201	4697
75°	9842	4789	4434
80°	8589	4425	4165
85°	6584	4078	3814

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13516 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.2	4.7
10°-20°	445.4	12.7
20°-30°	616.7	17.6
30°-40°	661.9	18.8
40°-50°	602.0	17.1
50°-60°	474.0	13.5
60°-70°	324.4	9.2
70°-80°	174.7	5.0
80°-90°	49.5	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°	1226.3	34.9
0°-40°	1888.2	53.8
0°-60°	2964.2	84.4
0°-90°	3512.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3512.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1764	1764	1764	1764	1764	
5°	1743	1762	1739	1730	1738	165
15°	1662	1644	1574	1531	1526	469
25°	1514	1452	1326	1230	1207	697
35°	1313	1211	1029	904	872	822
45°	1081	944	736	609	585	833
55°	824	667	468	378	372	737
65°	559	400	269	239	238	552
75°	288	175	140	128	130	308
85°	65	44	40	38	38	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1763.6	1763.6	1763.6	1763.6	1763.6
2.5°	1750.7	1771.4	1755.8	1758.4	1761.0
5°	1742.9	1762.3	1739.0	1729.9	1737.7
7.5°	1729.9	1742.9	1706.5	1689.7	1697.5
10°	1713.0	1715.6	1667.6	1642.9	1646.8
12.5°	1689.7	1683.2	1624.8	1589.7	1592.3
15°	1662.4	1644.2	1574.2	1531.3	1526.1
17.5°	1631.3	1601.4	1518.4	1463.9	1453.5
20°	1596.2	1556.0	1458.7	1388.6	1376.9
22.5°	1557.3	1505.4	1393.8	1310.7	1293.9
25°	1514.5	1452.2	1326.3	1230.3	1206.9
27.5°	1467.7	1395.1	1253.6	1148.5	1118.7
30°	1418.4	1335.4	1179.7	1066.7	1035.6
32.5°	1367.8	1274.4	1104.4	985.0	952.5
35°	1313.3	1210.8	1029.1	904.5	872.1
37.5°	1257.5	1144.6	952.5	826.7	792.9
40°	1200.4	1078.4	878.6	748.8	721.5
42.5°	1142.0	1010.9	805.9	676.1	651.5
45°	1081.0	943.5	735.8	608.6	585.3
47.5°	1018.7	874.7	664.4	545.1	523.0
50°	952.5	805.9	597.0	482.8	459.4
52.5°	889.0	735.8	532.1	421.8	410.1
55°	824.1	667.0	468.5	377.6	372.5
57.5°	759.2	598.3	410.1	342.6	337.4
60°	693.0	530.8	350.4	306.3	301.1
62.5°	626.8	464.6	306.3	271.2	268.6
65°	559.3	399.7	268.6	238.8	237.5
67.5°	488.0	337.4	234.9	210.2	208.9
70°	420.5	275.1	201.2	181.7	181.7
72.5°	356.9	218.0	170.0	154.4	154.4
75°	288.1	175.2	140.2	128.5	129.8
77.5°	227.1	137.6	112.9	105.1	105.1
80°	168.7	102.5	86.9	80.5	81.8
82.5°	114.2	71.4	62.3	58.4	58.4
85°	64.9	44.1	40.2	37.6	37.6
87.5°	23.4	20.8	19.5	16.9	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)