

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: P1055974

Luminaire Tested: S124R3DR-S1020D940-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055974
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1020D940-X4F0-XX-UDD-FLL-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

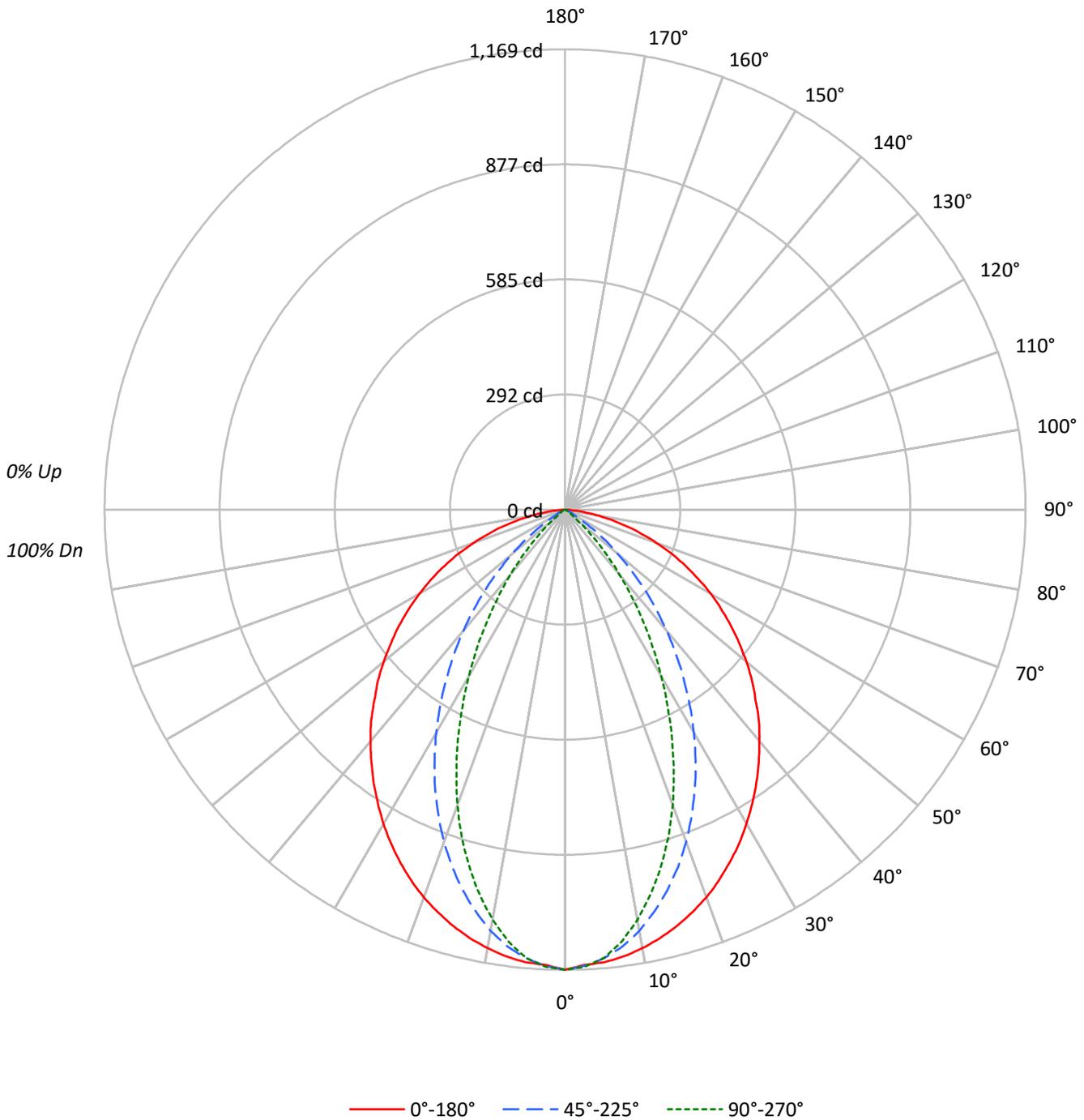
Lumens per Lamp: N/A
Luminaire Lumens: 1633.6 lumens
Efficiency: N/A
Efficacy: 47.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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				
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64				
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57				
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52				
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47				
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43				
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40				
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10334	10334	10334
5°	10241	10150	10140
10°	10154	9753	9496
15°	10027	9167	8600
20°	9865	8453	7515
25°	9647	7613	6272
30°	9406	6680	4984
35°	9140	5664	3711
40°	8862	4615	2473
45°	8554	3525	1362
50°	8260	2411	378
55°	7931	1307	247
60°	7538	405	141
65°	7048	264	71
70°	6370	119	28
75°	5479	38	0
80°	4145	0	0
85°	1745	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8554 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	6.6
10°-20°	283.1	17.3
20°-30°	365.8	22.4
30°-40°	349.6	21.4
40°-50°	261.5	16.0
50°-60°	155.6	9.5
60°-70°	79.0	4.8
70°-80°	27.5	1.7
80°-90°	3.8	0.2
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°	756.7	46.3
0°-40°	1106.3	67.7
0°-60°	1523.4	93.3
0°-90°	1633.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1633.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1169	1169	1169	1169	1169	
5°	1154	1163	1144	1138	1142	109
15°	1096	1073	1002	954	940	309
25°	989	920	780	677	643	455
35°	847	730	525	391	344	530
45°	684	525	282	150	109	529
55°	514	320	85	20	16	459
65°	337	130	13	5	3	333
75°	160	17	1	1	0	170
85°	17	0	0	0	0	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.8	<i>1168.8</i>	1168.8	1168.8	1168.8
2.5°	<i>1157.4</i>	<i>1171.1</i>	<i>1159.7</i>	<i>1160.8</i>	<i>1161.9</i>
5°	1153.9	<i>1163.1</i>	1143.6	1137.9	1142.5
7.5°	1144.8	<i>1148.2</i>	1119.5	1104.7	1105.8
10°	1131.0	<i>1127.6</i>	1086.3	1061.1	1057.7
12.5°	1115.0	<i>1103.5</i>	1046.2	1009.5	1001.5
15°	1095.5	<i>1072.6</i>	1001.5	954.5	939.6
17.5°	1072.6	<i>1039.3</i>	952.2	890.4	872.0
20°	1048.5	<i>1002.7</i>	898.4	821.6	798.7
22.5°	1019.9	<i>961.4</i>	839.9	749.4	720.8
25°	988.9	<i>920.2</i>	780.4	677.2	642.9
27.5°	956.8	<i>875.5</i>	717.3	603.9	563.8
30°	921.3	<i>828.5</i>	654.3	529.4	488.2
32.5°	884.6	<i>780.4</i>	589.0	460.7	414.8
35°	846.8	<i>729.9</i>	524.8	390.8	343.8
37.5°	807.9	<i>679.5</i>	462.9	324.3	276.2
40°	767.8	<i>628.0</i>	399.9	261.3	214.3
42.5°	728.8	<i>576.4</i>	340.3	201.7	158.1
45°	684.1	<i>524.8</i>	281.9	150.1	108.9
47.5°	644.0	<i>474.4</i>	225.7	102.0	64.2
50°	600.5	<i>420.5</i>	175.3	59.6	27.5
52.5°	556.9	<i>370.1</i>	128.3	26.4	20.6
55°	514.5	<i>319.7</i>	84.8	19.5	16.0
57.5°	469.8	<i>269.3</i>	45.8	14.9	11.5
60°	426.3	<i>220.0</i>	22.9	11.5	8.0
62.5°	381.6	<i>173.0</i>	18.3	6.9	4.6
65°	336.9	<i>129.5</i>	12.6	4.6	3.4
67.5°	292.2	<i>88.2</i>	8.0	2.3	1.1
70°	246.4	<i>53.9</i>	4.6	1.1	1.1
72.5°	202.8	<i>27.5</i>	2.3	1.1	1.1
75°	160.4	<i>17.2</i>	1.1	1.1	0.0
77.5°	119.2	<i>9.2</i>	1.1	1.1	0.0
80°	81.4	<i>3.4</i>	0.0	0.0	0.0
82.5°	47.0	<i>1.1</i>	0.0	0.0	0.0
85°	17.2	<i>0.0</i>	0.0	0.0	0.0
87.5°	0.0	<i>0.0</i>	0.0	0.0	0.0
90°	0.0	<i>0.0</i>	0.0	0.0	0.0

(END OF REPORT)