

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: P1055599

Luminaire Tested: S123R3DR-S1165D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055599  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S1165D950-X4F0-XX-UDD-FLL-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

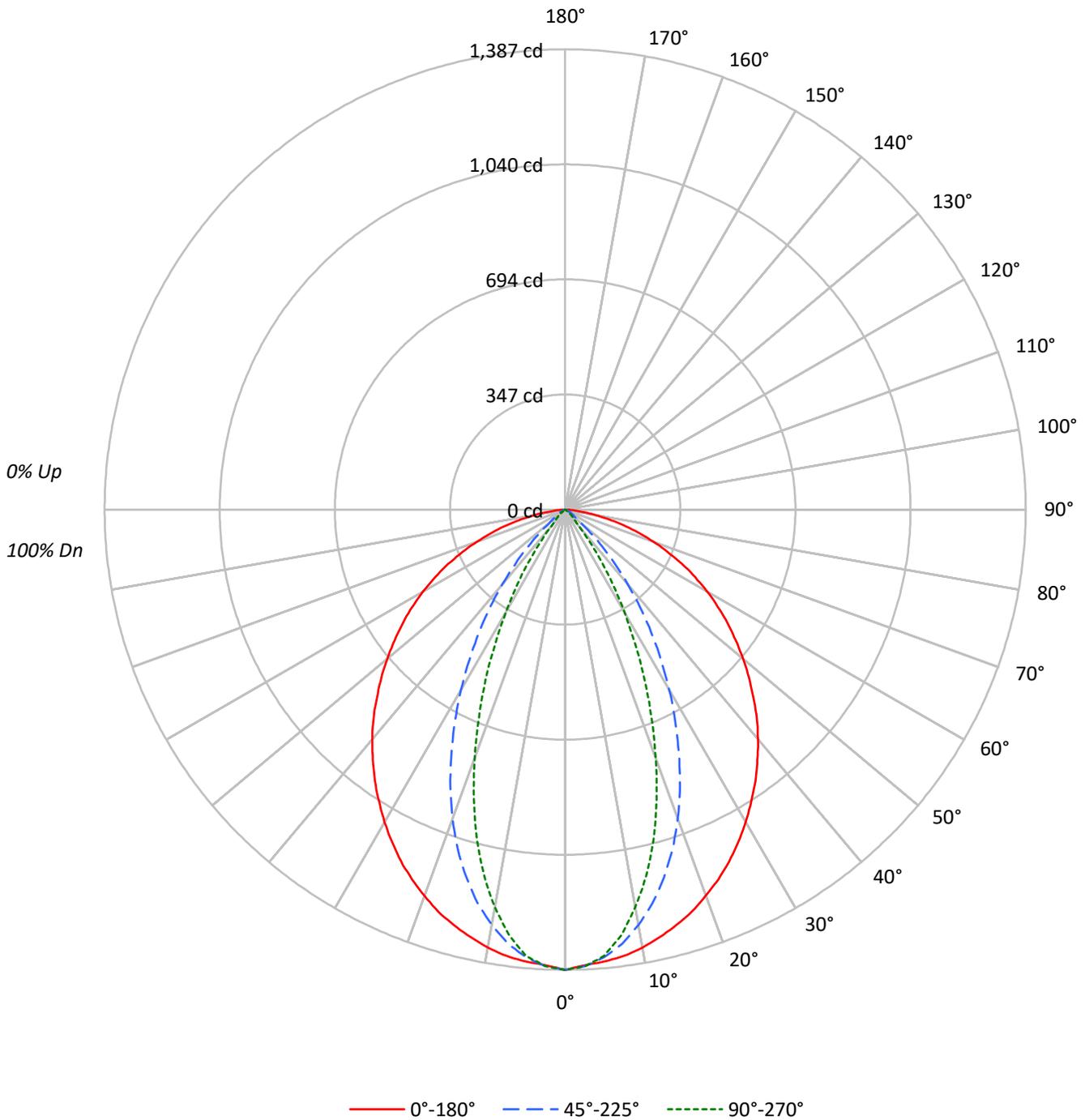
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1623.3 lumens  
Efficiency: N/A  
Efficacy: 38.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' 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				
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54				
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43				
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40				

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

	0°	45°	90°
0°	16722	16722	16722
5°	16542	16386	16333
10°	16416	15553	14901
15°	16180	14330	12840
20°	15894	12719	10227
25°	15560	10775	7541
30°	15142	8733	4948
35°	14696	6650	2711
40°	14221	4597	929
45°	13664	2673	540
50°	13115	1052	324
55°	12551	666	151
60°	11900	417	70
65°	11083	205	40
70°	9941	102	49
75°	8445	65	65
80°	6290	97	0
85°	2393	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13664 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.2	7.8
10°-20°	322.7	19.9
20°-30°	384.9	23.7
30°-40°	326.5	20.1
40°-50°	221.9	13.7
50°-60°	137.6	8.5
60°-70°	69.7	4.3
70°-80°	28.4	1.7
80°-90°	4.4	0.3
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°	834.8	51.4
0°-40°	1161.4	71.5
0°-60°	1520.8	93.7
0°-90°	1623.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1623.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1387	1387	1387	1387	1387	
5°	1367	1380	1354	1344	1350	130
15°	1296	1263	1148	1058	1029	365
25°	1170	1060	810	626	567	538
35°	998	801	452	243	184	624
45°	801	525	157	39	32	619
55°	597	265	32	12	7	533
65°	388	65	7	1	1	384
75°	181	12	1	1	1	193
85°	17	0	0	1	0	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1387.0	1387.0	1387.0	1387.0	1387.0
2.5°	1374.0	1392.7	1376.9	1375.5	1376.9
5°	1366.8	1379.8	1353.9	1343.8	1349.6
7.5°	1356.8	1362.5	1319.4	1293.5	1293.5
10°	1340.9	1336.6	1270.4	1227.3	1217.2
12.5°	1319.4	1302.1	1215.8	1148.1	1129.4
15°	1296.3	1263.2	1148.1	1057.5	1028.7
17.5°	1270.4	1220.1	1074.8	956.8	915.1
20°	1238.8	1171.2	991.3	847.4	797.1
22.5°	1205.7	1117.9	903.6	735.2	679.1
25°	1169.7	1060.4	810.0	625.9	566.9
27.5°	1129.4	999.9	717.9	520.8	456.1
30°	1087.7	936.6	627.3	420.1	355.4
32.5°	1043.1	870.5	536.7	328.0	267.6
35°	998.5	801.4	451.8	243.2	184.2
37.5°	951.0	732.3	369.8	168.3	116.5
40°	903.6	664.7	292.1	106.5	59.0
42.5°	854.6	594.2	221.6	53.2	40.3
45°	801.4	525.2	156.8	38.8	31.7
47.5°	751.0	459.0	103.6	31.7	24.5
50°	699.2	392.8	56.1	23.0	17.3
52.5°	647.4	329.5	40.3	17.3	11.5
55°	597.1	264.7	31.7	11.5	7.2
57.5°	545.3	208.6	24.5	7.2	4.3
60°	493.5	153.9	17.3	4.3	2.9
62.5°	441.7	106.5	11.5	2.9	1.4
65°	388.5	64.7	7.2	1.4	1.4
67.5°	333.8	44.6	4.3	1.4	1.4
70°	282.0	31.7	2.9	1.4	1.4
72.5°	230.2	20.1	1.4	1.4	0.0
75°	181.3	11.5	1.4	1.4	1.4
77.5°	133.8	4.3	1.4	1.4	0.0
80°	90.6	1.4	1.4	1.4	0.0
82.5°	50.4	0.0	1.4	1.4	0.0
85°	17.3	0.0	0.0	1.4	0.0
87.5°	0.0	0.0	0.0	1.4	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)