

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: P1055590

Luminaire Tested: S123R3DR-S1165D930-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055590  
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-S1165D930-X4F0-XX-UDD-FLL-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

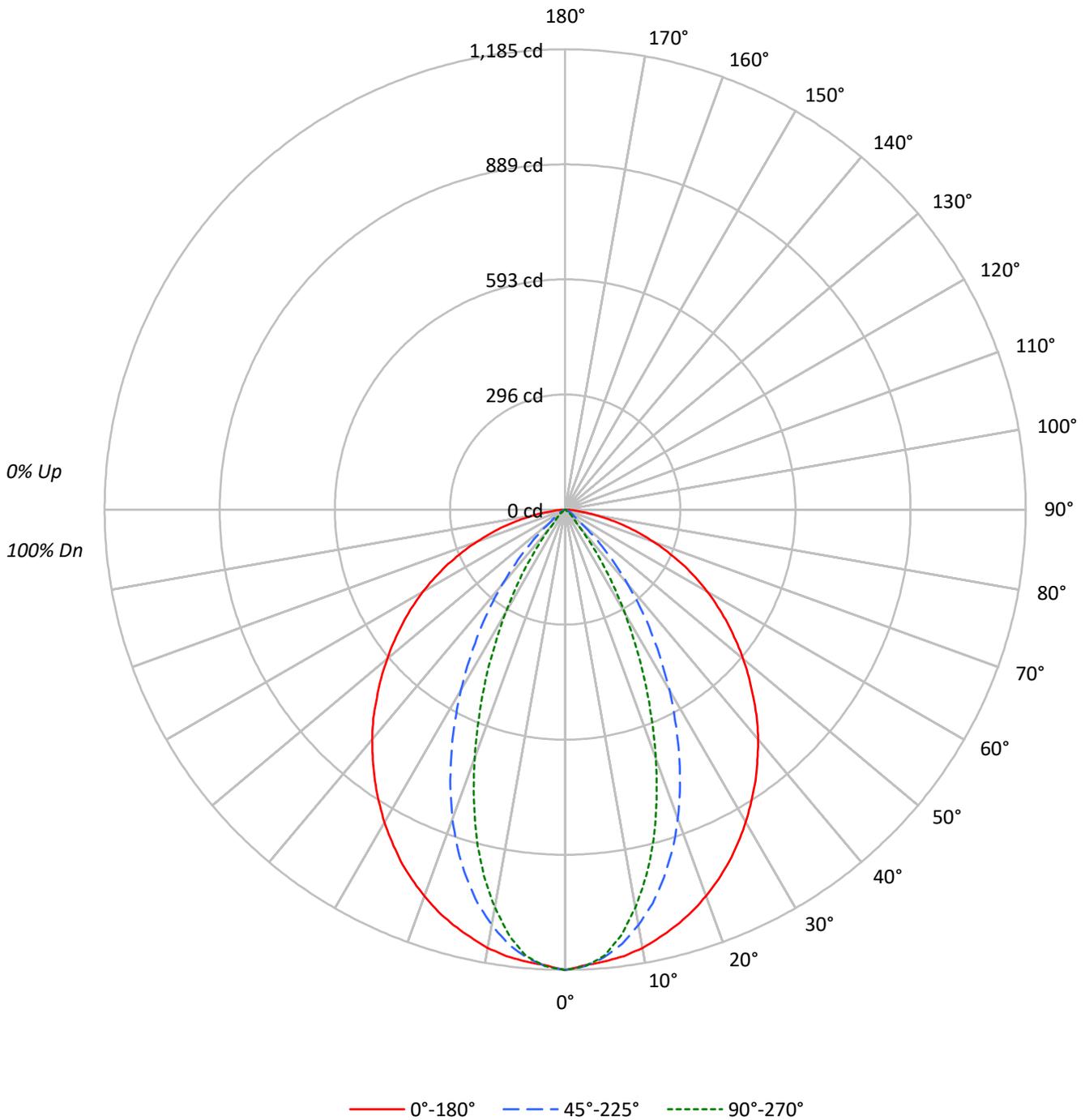
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1387.3 lumens  
Efficiency: N/A  
Efficacy: 33.1 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°	14290	14290	14290
5°	14137	14003	13959
10°	14030	13292	12735
15°	13828	12247	10974
20°	13583	10870	8740
25°	13299	9210	6445
30°	12941	7463	4228
35°	12559	5683	2317
40°	12153	3928	793
45°	11678	2285	462
50°	11209	900	278
55°	10726	570	128
60°	10168	357	60
65°	9471	174	34
70°	8495	88	42
75°	7216	56	56
80°	5381	83	0
85°	2047	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11678 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.7	7.8
10°-20°	275.8	19.9
20°-30°	329.0	23.7
30°-40°	279.1	20.1
40°-50°	189.7	13.7
50°-60°	117.6	8.5
60°-70°	59.5	4.3
70°-80°	24.3	1.7
80°-90°	3.7	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°	713.5	51.4
0°-40°	992.5	71.5
0°-60°	1299.7	93.7
0°-90°	1387.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1387.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1185	1185	1185	1185	1185	
5°	1168	1179	1157	1148	1153	111
15°	1108	1080	981	904	879	312
25°	1000	906	692	535	484	460
35°	853	685	386	208	157	533
45°	685	449	134	33	27	529
55°	510	226	27	10	6	456
65°	332	55	6	1	1	328
75°	155	10	1	1	1	165
85°	15	0	0	1	0	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1185.3	<i>1185.3</i>	1185.3	1185.3	1185.3
2.5°	<i>1174.3</i>	<i>1190.2</i>	<i>1176.7</i>	<i>1175.5</i>	<i>1176.7</i>
5°	1168.1	<i>1179.2</i>	1157.0	1148.4	1153.4
7.5°	1159.5	<i>1164.4</i>	1127.5	1105.4	1105.4
10°	1146.0	<i>1142.3</i>	1085.7	1048.8	1040.2
12.5°	1127.5	<i>1112.8</i>	1039.0	981.2	965.2
15°	1107.9	<i>1079.6</i>	981.2	903.7	879.2
17.5°	1085.7	<i>1042.7</i>	918.5	817.7	782.0
20°	1058.7	<i>1000.9</i>	847.2	724.2	681.2
22.5°	1030.4	<i>955.4</i>	772.2	628.3	580.4
25°	999.7	<i>906.2</i>	692.3	534.9	484.5
27.5°	965.2	<i>854.6</i>	613.6	445.1	389.8
30°	929.6	<i>800.5</i>	536.1	359.0	303.7
32.5°	891.5	<i>743.9</i>	458.6	280.3	228.7
35°	853.3	<i>684.9</i>	386.1	207.8	157.4
37.5°	812.8	<i>625.9</i>	316.0	143.9	99.6
40°	772.2	<i>568.1</i>	249.6	91.0	50.4
42.5°	730.4	<i>507.8</i>	189.4	45.5	34.4
45°	684.9	<i>448.8</i>	134.0	33.2	27.1
47.5°	641.8	<i>392.2</i>	88.5	27.1	20.9
50°	597.6	<i>335.7</i>	48.0	19.7	14.8
52.5°	553.3	<i>281.6</i>	34.4	14.8	9.8
55°	510.3	<i>226.2</i>	27.1	9.8	6.1
57.5°	466.0	<i>178.3</i>	20.9	6.1	3.7
60°	421.7	<i>131.6</i>	14.8	3.7	2.5
62.5°	377.5	<i>91.0</i>	9.8	2.5	1.2
65°	332.0	<i>55.3</i>	6.1	1.2	1.2
67.5°	285.3	<i>38.1</i>	3.7	1.2	1.2
70°	241.0	<i>27.1</i>	2.5	1.2	1.2
72.5°	196.7	<i>17.2</i>	1.2	1.2	0.0
75°	154.9	<i>9.8</i>	1.2	1.2	1.2
77.5°	114.4	<i>3.7</i>	1.2	1.2	0.0
80°	77.5	<i>1.2</i>	1.2	1.2	0.0
82.5°	43.0	<i>0.0</i>	1.2	1.2	0.0
85°	14.8	<i>0.0</i>	0.0	1.2	0.0
87.5°	0.0	<i>0.0</i>	0.0	1.2	0.0
90°	0.0	<i>0.0</i>	0.0	0.0	0.0

(END OF REPORT)