

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: P1055580

Luminaire Tested: S123R3DR-S1165D835-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055580  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S1165D835-X4F0-XX-UDD-FLL-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

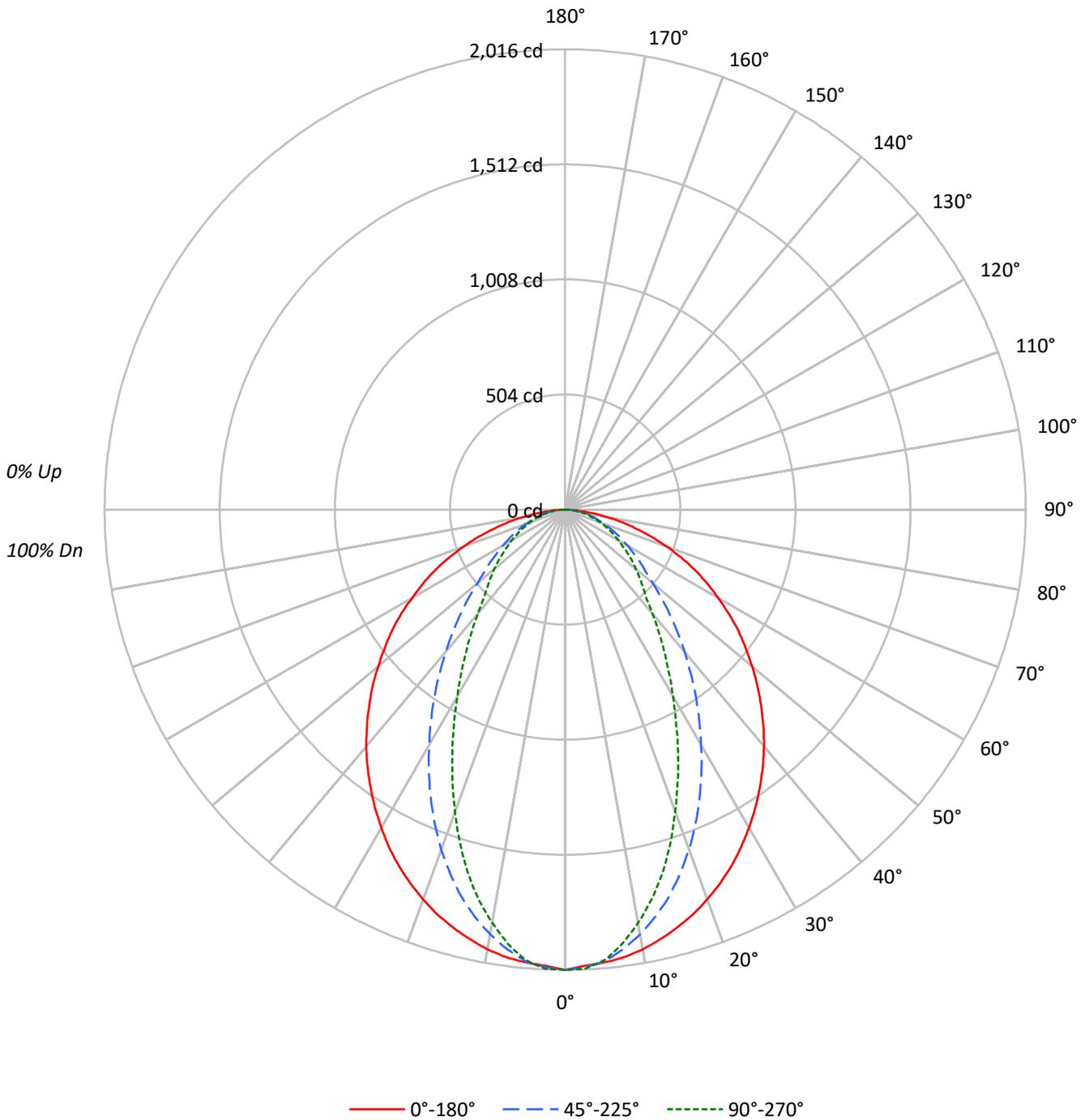
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3536.4 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

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

	0°	45°	90°
0°	24311	24311	24311
5°	24094	24038	23983
10°	23947	23134	22506
15°	23662	21912	20556
20°	23316	20337	18073
25°	22911	18517	15548
30°	22403	16565	13143
35°	21864	14650	11099
40°	21315	12794	9328
45°	20675	11032	8228
50°	20028	9391	7553
55°	19433	8370	6974
60°	18620	7564	6510
65°	17856	6927	6111
70°	16642	6380	5742
75°	14892	5902	5408
80°	12775	5443	5027
85°	8978	5008	4800

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20675 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	186.9	5.3
10°-20°	494.5	14.0
20°-30°	651.4	18.4
30°-40°	661.2	18.7
40°-50°	574.7	16.3
50°-60°	450.3	12.7
60°-70°	305.9	8.7
70°-80°	165.8	4.7
80°-90°	45.6	1.3
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°	1332.9	37.7
0°-40°	1994.1	56.4
0°-60°	3019.1	85.4
0°-90°	3536.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3536.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2016	2016	2016	2016	2016	
5°	1991	2015	1986	1968	1982	189
15°	1896	1869	1756	1670	1647	534
25°	1722	1618	1392	1219	1169	793
35°	1486	1309	995	805	754	929
45°	1213	973	647	499	483	936
55°	924	642	398	339	332	825
65°	626	347	243	217	214	618
75°	320	160	127	118	116	341
85°	65	39	36	33	35	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2016.4	2016.4	2016.4	2016.4	2016.4
2.5°	1999.8	2025.4	2005.8	2007.4	2013.4
5°	1990.8	2014.9	1986.2	1968.1	1981.7
7.5°	1977.2	1995.3	1942.5	1913.8	1918.4
10°	1956.1	1962.1	1889.7	1844.5	1838.4
12.5°	1927.4	1916.9	1826.4	1760.0	1749.5
15°	1895.7	1868.6	1755.5	1669.5	1646.9
17.5°	1859.6	1814.3	1672.5	1567.0	1532.3
20°	1817.3	1754.0	1585.1	1450.8	1408.6
22.5°	1772.1	1690.6	1490.1	1331.7	1288.0
25°	1722.3	1618.2	1392.0	1218.6	1168.8
27.5°	1668.0	1545.9	1292.5	1107.0	1051.2
30°	1609.2	1470.4	1189.9	998.4	944.1
32.5°	1548.9	1390.5	1091.9	897.4	844.6
35°	1485.5	1309.1	995.4	805.4	754.1
37.5°	1420.7	1226.1	901.9	717.9	669.6
40°	1354.3	1141.7	812.9	636.4	592.7
42.5°	1283.4	1057.2	726.9	559.5	526.3
45°	1212.6	972.8	647.0	499.2	482.6
47.5°	1141.7	886.8	571.6	457.0	441.9
50°	1067.8	803.8	500.7	417.8	402.7
52.5°	995.4	722.4	441.9	380.1	369.5
55°	924.5	642.5	398.2	339.3	331.8
57.5°	850.6	564.0	354.4	307.7	298.6
60°	772.2	488.6	313.7	274.5	270.0
62.5°	701.3	417.8	277.5	245.8	241.3
65°	625.9	346.9	242.8	217.2	214.2
67.5°	549.0	288.1	211.1	190.0	188.5
70°	472.1	242.8	181.0	164.4	162.9
72.5°	396.6	200.6	152.3	141.8	138.7
75°	319.7	159.9	126.7	117.6	116.1
77.5°	250.4	123.7	101.0	95.0	93.5
80°	184.0	92.0	78.4	73.9	72.4
82.5°	120.7	63.3	55.8	52.8	52.8
85°	64.9	39.2	36.2	33.2	34.7
87.5°	22.6	16.6	16.6	15.1	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)