

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055592

Luminaire Tested: S123R3DR-S1165D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055592  
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-S1165D930-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

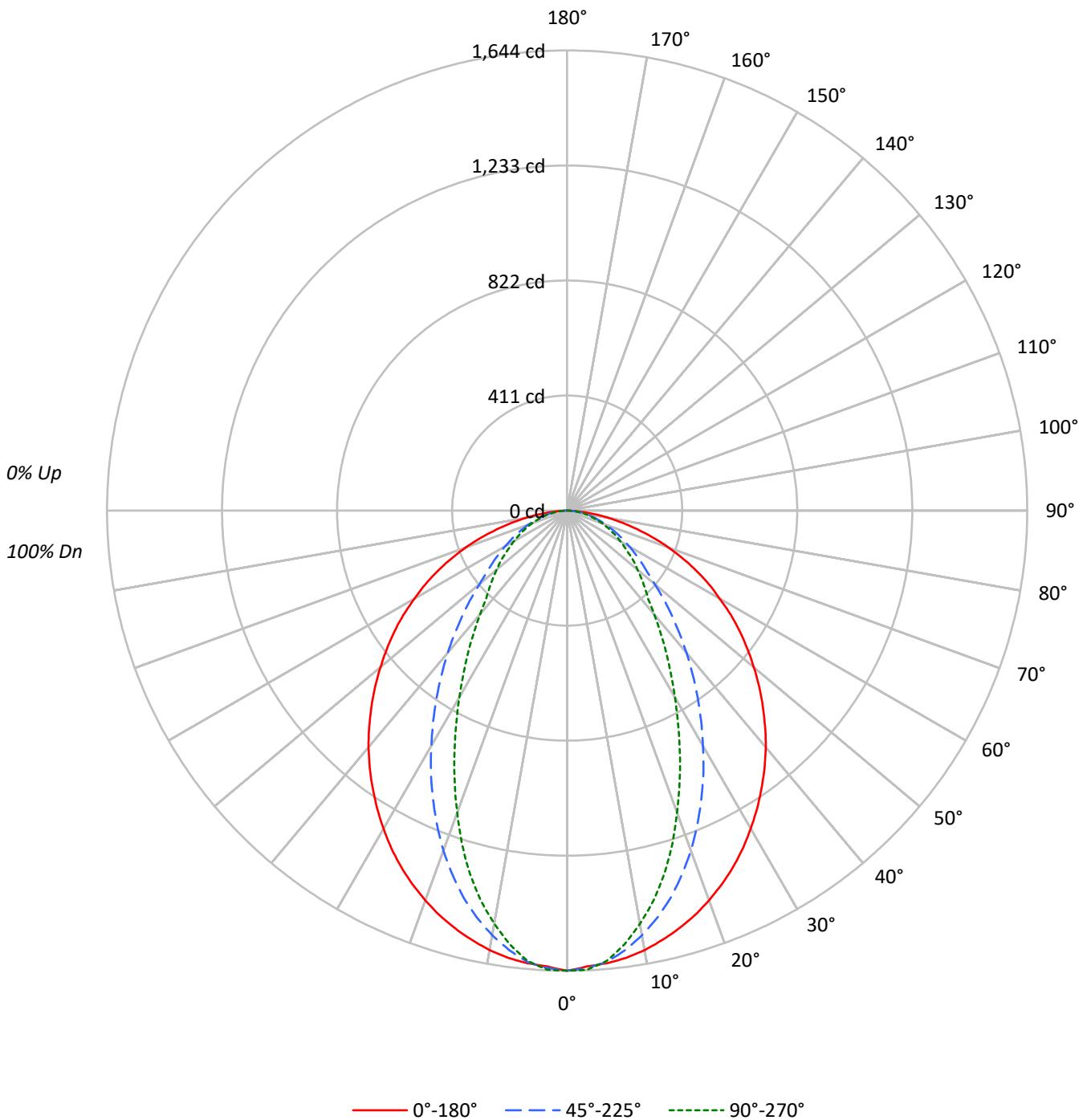
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2883.3 lumens  
Efficiency: N/A  
Efficacy: 68.8 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 (A<sub>in</sub>): 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°	19821	19821	19821
5°	19644	19599	19554
10°	19524	18862	18350
15°	19292	17864	16759
20°	19010	16580	14734
25°	18680	15097	12676
30°	18265	13505	10715
35°	17825	11944	9049
40°	17378	10431	7605
45°	16856	8994	6709
50°	16329	7656	6158
55°	15843	6823	5686
60°	15181	6168	5307
65°	14558	5649	4981
70°	13568	5203	4681
75°	12144	4812	4411
80°	10415	4437	4096
85°	7318	4081	3915

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16856 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.4	5.3
10°-20°	403.2	14.0
20°-30°	531.1	18.4
30°-40°	539.1	18.7
40°-50°	468.6	16.3
50°-60°	367.1	12.7
60°-70°	249.4	8.7
70°-80°	135.2	4.7
80°-90°	37.2	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°	1086.7	37.7
0°-40°	1625.8	56.4
0°-60°	2461.5	85.4
0°-90°	2883.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2883.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1644	1644	1644	1644	1644	
5°	1623	1643	1619	1605	1616	154
15°	1546	1524	1431	1361	1343	436
25°	1404	1319	1135	994	953	646
35°	1211	1067	812	657	615	758
45°	989	793	528	407	394	763
55°	754	524	325	277	270	673
65°	510	283	198	177	175	504
75°	261	130	103	96	95	278
85°	53	32	30	27	28	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1644.0	1644.0	1644.0	1644.0	1644.0
2.5°	1630.4	1651.3	1635.4	1636.6	1641.5
5°	1623.1	1642.7	1619.4	1604.6	1615.7
7.5°	1612.0	1626.8	1583.7	1560.4	1564.0
10°	1594.8	1599.7	1540.7	1503.8	1498.9
12.5°	1571.4	1562.8	1489.0	1434.9	1426.3
15°	1545.6	1523.5	1431.2	1361.2	1342.7
17.5°	1516.1	1479.2	1363.6	1277.5	1249.3
20°	1481.7	1430.0	1292.3	1182.9	1148.4
22.5°	1444.8	1378.4	1214.8	1085.7	1050.1
25°	1404.2	1319.4	1134.9	993.5	952.9
27.5°	1359.9	1260.3	1053.8	902.5	857.0
30°	1312.0	1198.9	970.1	814.0	769.7
32.5°	1262.8	1133.7	890.2	731.6	688.6
35°	1211.1	1067.3	811.5	656.6	614.8
37.5°	1158.3	999.7	735.3	585.3	545.9
40°	1104.2	930.8	662.8	518.9	483.2
42.5°	1046.4	861.9	592.7	456.2	429.1
45°	988.6	793.1	527.5	407.0	393.5
47.5°	930.8	723.0	466.0	372.6	360.3
50°	870.6	655.4	408.2	340.6	328.3
52.5°	811.5	589.0	360.3	309.9	301.3
55°	753.7	523.8	324.6	276.7	270.5
57.5°	693.5	459.9	289.0	250.8	243.5
60°	629.6	398.4	255.8	223.8	220.1
62.5°	571.8	340.6	226.2	200.4	196.7
65°	510.3	282.8	198.0	177.1	174.6
67.5°	447.6	234.9	172.1	154.9	153.7
70°	384.9	198.0	147.6	134.0	132.8
72.5°	323.4	163.5	124.2	115.6	113.1
75°	260.7	130.3	103.3	95.9	94.7
77.5°	204.1	100.8	82.4	77.5	76.2
80°	150.0	75.0	63.9	60.3	59.0
82.5°	98.4	51.6	45.5	43.0	43.0
85°	52.9	32.0	29.5	27.1	28.3
87.5°	18.4	13.5	13.5	12.3	13.5
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.94	22.43	21.30	22.74	23.06	16.08	17.58	16.45	17.89	18.20
	3H	22.82	24.16	23.20	24.49	24.85	17.71	19.05	18.09	19.38	19.74
	4H	23.58	24.83	23.98	25.18	25.56	18.35	19.60	18.75	19.95	20.33
	6H	24.14	25.30	24.56	25.67	26.06	18.84	20.00	19.25	20.36	20.76
	8H	24.32	25.42	24.74	25.81	26.21	19.01	20.11	19.43	20.50	20.90
	12H	24.41	25.47	24.84	25.85	26.28	19.13	20.19	19.56	20.57	21.00
4H	2H	20.98	22.24	21.38	22.59	22.97	16.81	18.07	17.21	18.42	18.80
	3H	23.00	24.04	23.41	24.44	24.84	18.63	19.68	19.04	20.08	20.48
	4H	23.82	24.76	24.25	25.17	25.61	19.38	20.32	19.81	20.74	21.17
	6H	24.50	25.32	24.96	25.76	26.22	19.99	20.81	20.45	21.25	21.71
	8H	24.73	25.49	25.19	25.94	26.40	20.20	20.97	20.67	21.41	21.88
	12H	24.88	25.56	25.36	26.04	26.51	20.37	21.05	20.85	21.53	22.00
8H	4H	23.84	24.60	24.30	25.05	25.52	19.76	20.53	20.23	20.97	21.44
	6H	24.57	25.20	25.07	25.69	26.17	20.49	21.12	20.99	21.61	22.09
	8H	24.84	25.40	25.35	25.91	26.40	20.78	21.34	21.29	21.85	22.34
	12H	25.05	25.55	25.56	26.04	26.60	21.02	21.52	21.53	22.02	22.58
12H	4H	23.83	24.51	24.31	24.99	25.46	19.82	20.50	20.30	20.98	21.45
	6H	24.55	25.12	25.07	25.63	26.12	20.57	21.14	21.09	21.65	22.14
	8H	24.86	25.36	25.37	25.85	26.42	20.92	21.42	21.43	21.91	22.48