

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: P1055589

Luminaire Tested: S123R3DR-S1165D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055589  
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-S1165D927-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

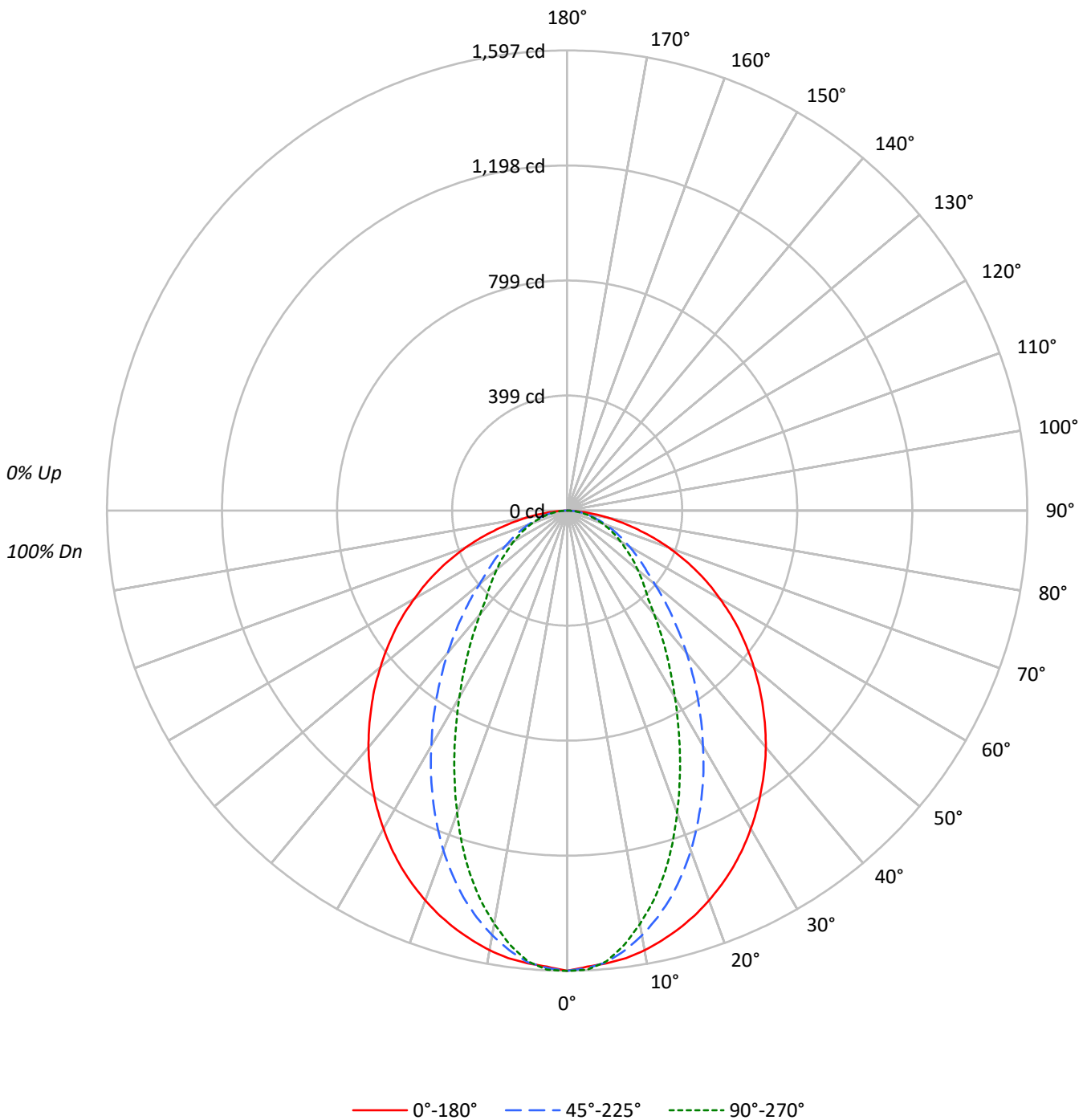
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2801.5 lumens  
Efficiency: N/A  
Efficacy: 66.9 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																		
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	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												100																
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86												86																
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74												74																
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65												65																
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57												57																
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50												50																
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45												45																
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40												40																
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37												37																
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34												34																
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31												31																

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

	0°	45°	90°
0°	19259	19259	19259
5°	19086	19043	19000
10°	18971	18327	17830
15°	18745	17358	16284
20°	18470	16111	14317
25°	18150	14669	12317
30°	17747	13122	10412
35°	17320	11605	8793
40°	16886	10136	7389
45°	16379	8738	6518
50°	15866	7441	5983
55°	15395	6630	5524
60°	14750	5992	5158
65°	14144	5489	4841
70°	13184	5055	4547
75°	11799	4677	4286
80°	10123	4312	3978
85°	7110	3970	3804

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16379 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.1	5.3
10°-20°	391.8	14.0
20°-30°	516.1	18.4
30°-40°	523.8	18.7
40°-50°	455.3	16.3
50°-60°	356.7	12.7
60°-70°	242.3	8.7
70°-80°	131.3	4.7
80°-90°	36.2	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°	1055.9	37.7
0°-40°	1579.7	56.4
0°-60°	2391.7	85.4
0°-90°	2801.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2801.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1597	1597	1597	1597	1597	
5°	1577	1596	1574	1559	1570	150
15°	1502	1480	1391	1323	1305	423
25°	1364	1282	1103	965	926	628
35°	1177	1037	788	638	597	736
45°	961	771	512	396	382	741
55°	732	509	315	269	263	654
65°	496	275	192	172	170	490
75°	253	127	100	93	92	270
85°	51	31	29	26	28	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1597.4	1597.4	1597.4	1597.4	1597.4
2.5°	1584.2	1604.5	1589.0	1590.2	1595.0
5°	1577.0	1596.2	1573.5	1559.1	1569.9
7.5°	1566.3	1580.6	1538.8	1516.1	1519.7
10°	1549.6	1554.3	1497.0	1461.2	1456.4
12.5°	1526.9	1518.5	1446.8	1394.2	1385.9
15°	1501.8	1480.3	1390.7	1322.6	1304.6
17.5°	1473.1	1437.3	1325.0	1241.3	1213.8
20°	1439.6	1389.5	1255.7	1149.3	1115.9
22.5°	1403.8	1339.3	1180.4	1054.9	1020.3
25°	1364.4	1281.9	1102.7	965.3	925.9
27.5°	1321.4	1224.6	1023.9	876.9	832.7
30°	1274.8	1164.9	942.6	790.9	747.9
32.5°	1227.0	1101.5	865.0	710.9	669.0
35°	1176.8	1037.0	788.5	638.0	597.4
37.5°	1125.4	971.3	714.4	568.7	530.5
40°	1072.9	904.4	644.0	504.2	469.5
42.5°	1016.7	837.5	575.9	443.2	417.0
45°	960.6	770.6	512.5	395.5	382.3
47.5°	904.4	702.5	452.8	362.0	350.1
50°	845.9	636.8	396.7	330.9	319.0
52.5°	788.5	572.3	350.1	301.1	292.7
55°	732.4	509.0	315.4	268.8	262.8
57.5°	673.8	446.8	280.8	243.7	236.6
60°	611.7	387.1	248.5	217.4	213.9
62.5°	555.5	330.9	219.8	194.7	191.2
65°	495.8	274.8	192.4	172.0	169.7
67.5°	434.9	228.2	167.3	150.5	149.3
70°	374.0	192.4	143.4	130.2	129.0
72.5°	314.2	158.9	120.7	112.3	109.9
75°	253.3	126.6	100.4	93.2	92.0
77.5°	198.3	98.0	80.0	75.3	74.1
80°	145.8	72.9	62.1	58.5	57.3
82.5°	95.6	50.2	44.2	41.8	41.8
85°	51.4	31.1	28.7	26.3	27.5
87.5°	17.9	13.1	13.1	11.9	13.1
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	20.83	22.33	21.20	22.64	22.95	15.98	17.48	16.35	17.79	18.10
	3H	22.72	24.06	23.10	24.39	24.75	17.61	18.95	17.99	19.28	19.64
	4H	23.48	24.73	23.88	25.08	25.46	18.25	19.50	18.65	19.85	20.23
	6H	24.04	25.20	24.45	25.57	25.96	18.74	19.90	19.15	20.26	20.66
	8H	24.22	25.32	24.64	25.71	26.11	18.91	20.01	19.33	20.40	20.80
	12H	24.31	25.37	24.74	25.75	26.18	19.03	20.09	19.46	20.47	20.90
4H	2H	20.88	22.14	21.28	22.49	22.86	16.71	17.97	17.11	18.32	18.70
	3H	22.90	23.94	23.31	24.34	24.74	18.53	19.58	18.94	19.98	20.38
	4H	23.72	24.66	24.15	25.07	25.51	19.28	20.22	19.71	20.64	21.07
	6H	24.40	25.22	24.86	25.66	26.12	19.89	20.71	20.35	21.15	21.61
	8H	24.63	25.39	25.09	25.84	26.30	20.10	20.87	20.57	21.31	21.78
	12H	24.78	25.46	25.26	25.94	26.41	20.27	20.95	20.75	21.43	21.90
8H	4H	23.74	24.50	24.20	24.95	25.42	19.66	20.43	20.13	20.87	21.34
	6H	24.47	25.10	24.97	25.59	26.07	20.39	21.02	20.89	21.51	21.99
	8H	24.74	25.30	25.25	25.81	26.30	20.68	21.24	21.19	21.75	22.24
	12H	24.95	25.45	25.46	25.94	26.51	20.92	21.42	21.43	21.92	22.48
12H	4H	23.73	24.41	24.21	24.89	25.36	19.72	20.40	20.20	20.88	21.35
	6H	24.45	25.02	24.97	25.53	26.02	20.47	21.04	20.99	21.55	22.04
	8H	24.76	25.26	25.27	25.75	26.32	20.82	21.32	21.33	21.81	22.38