

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: P1055262

Luminaire Tested: S122R3DR-S865D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055262  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S865D850-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

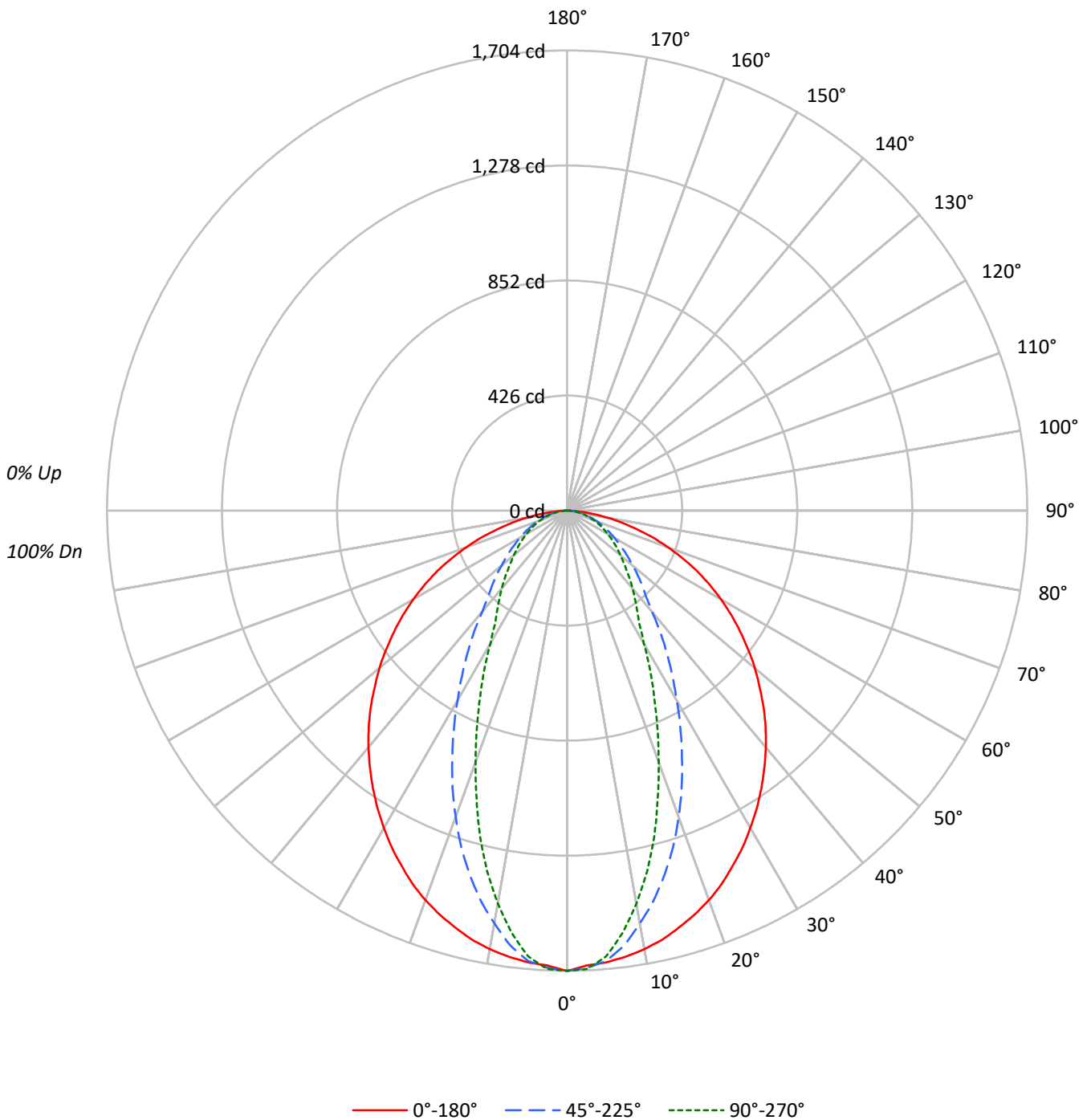
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2578.1 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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	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	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

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

	0°	45°	90°
0°	32293	32293	32293
5°	31928	31819	31521
10°	31722	29858	28432
15°	31363	27366	24459
20°	30946	24337	19970
25°	30328	21032	15938
30°	29680	17771	12439
35°	29006	14865	10450
40°	28303	12054	9304
45°	27568	10538	8325
50°	26757	9326	7601
55°	25844	8426	7062
60°	24948	7669	6589
65°	23769	7029	6195
70°	22025	6553	5844
75°	19508	5944	5527
80°	16638	5597	5128
85°	11456	4956	4652

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 27568 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.2	6.1
10°-20°	394.3	15.3
20°-30°	485.9	18.8
30°-40°	466.2	18.1
40°-50°	402.1	15.6
50°-60°	312.0	12.1
60°-70°	213.6	8.3
70°-80°	116.0	4.5
80°-90°	31.8	1.2
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°	1036.4	40.2
0°-40°	1502.6	58.3
0°-60°	2216.7	86.0
0°-90°	2578.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2578.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1704	1704	1704	1704	1704	
5°	1679	1703	1673	1652	1657	159
15°	1599	1550	1395	1281	1247	451
25°	1451	1295	1006	821	762	669
35°	1254	995	643	479	452	784
45°	1029	693	393	325	311	793
55°	782	416	255	221	214	700
65°	530	227	157	142	138	523
75°	266	104	81	77	76	286
85°	53	26	23	23	21	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1704.5	1704.5	1704.5	1704.5	1704.5
2.5°	1685.9	1714.4	1694.5	1694.5	1698.8
5°	1678.8	1703.0	1673.1	1651.7	1657.4
7.5°	1666.0	1683.1	1623.2	1577.6	1576.2
10°	1648.9	1650.3	1552.0	1492.1	1477.9
12.5°	1627.5	1604.7	1479.3	1389.5	1368.1
15°	1599.0	1550.5	1395.2	1281.2	1247.0
17.5°	1569.1	1495.0	1305.4	1162.9	1115.9
20°	1534.9	1428.0	1207.1	1044.6	990.5
22.5°	1496.4	1363.9	1108.8	930.6	873.6
25°	1450.8	1295.4	1006.1	820.9	762.4
27.5°	1406.6	1225.6	907.8	724.0	664.1
30°	1356.7	1150.1	812.3	631.3	568.6
32.5°	1306.9	1073.1	724.0	543.0	495.9
35°	1254.1	994.7	642.7	478.8	451.8
37.5°	1200.0	917.8	565.8	436.1	411.9
40°	1144.4	840.8	487.4	394.8	376.2
42.5°	1087.4	765.3	433.2	360.6	343.5
45°	1028.9	692.6	393.3	324.9	310.7
47.5°	966.2	619.9	354.9	295.0	282.2
50°	907.8	550.1	316.4	267.9	257.9
52.5°	845.1	481.7	285.0	243.7	235.1
55°	782.4	416.1	255.1	220.9	213.8
57.5°	721.1	353.4	226.6	199.5	193.8
60°	658.4	303.6	202.4	179.6	173.9
62.5°	594.3	263.7	179.6	161.0	155.3
65°	530.2	226.6	156.8	142.5	138.2
67.5°	463.2	191.0	136.8	125.4	122.6
70°	397.6	159.6	118.3	108.3	105.5
72.5°	333.5	129.7	99.8	92.6	89.8
75°	266.5	104.0	81.2	77.0	75.5
77.5°	208.1	81.2	65.6	62.7	61.3
80°	152.5	59.9	51.3	48.5	47.0
82.5°	101.2	41.3	37.1	35.6	34.2
85°	52.7	25.7	22.8	22.8	21.4
87.5°	17.1	11.4	11.4	11.4	10.0
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	21.68	23.15	22.05	23.46	23.78	16.49	17.95	16.85	18.27	18.58
	3H	24.01	25.33	24.39	25.66	26.02	18.13	19.45	18.51	19.78	20.14
	4H	24.91	26.14	25.31	26.49	26.87	18.77	20.00	19.17	20.35	20.73
	6H	25.57	26.71	25.98	27.08	27.47	19.26	20.40	19.68	20.77	21.16
	8H	25.78	26.86	26.20	27.25	27.65	19.43	20.52	19.86	20.91	21.31
	12H	25.89	26.93	26.32	27.31	27.74	19.55	20.59	19.98	20.97	21.40
4H	2H	21.70	22.93	22.10	23.28	23.66	17.20	18.44	17.60	18.79	19.17
	3H	24.11	25.13	24.52	25.54	25.94	19.05	20.08	19.46	20.48	20.88
	4H	25.04	25.96	25.47	26.38	26.82	19.80	20.72	20.23	21.14	21.58
	6H	25.82	26.62	26.28	27.06	27.52	20.41	21.22	20.87	21.66	22.12
	8H	26.09	26.84	26.55	27.28	27.75	20.63	21.38	21.09	21.82	22.29
	12H	26.27	26.93	26.75	27.41	27.88	20.79	21.46	21.27	21.94	22.41
8H	4H	25.03	25.78	25.50	26.23	26.69	20.18	20.93	20.64	21.37	21.84
	6H	25.84	26.46	26.34	26.95	27.43	20.92	21.53	21.41	22.03	22.50
	8H	26.14	26.70	26.66	27.21	27.70	21.21	21.76	21.73	22.28	22.76
	12H	26.37	26.86	26.88	27.35	27.92	21.45	21.94	21.97	22.44	23.00
12H	4H	25.01	25.68	25.50	26.16	26.63	20.23	20.90	20.72	21.38	21.85
	6H	25.82	26.37	26.33	26.88	27.37	21.00	21.56	21.52	22.07	22.56
	8H	26.15	26.64	26.66	27.13	27.70	21.36	21.85	21.87	22.34	22.90