

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: P1055253

Luminaire Tested: S122R3DR-S865D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055253  
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-S865D830-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

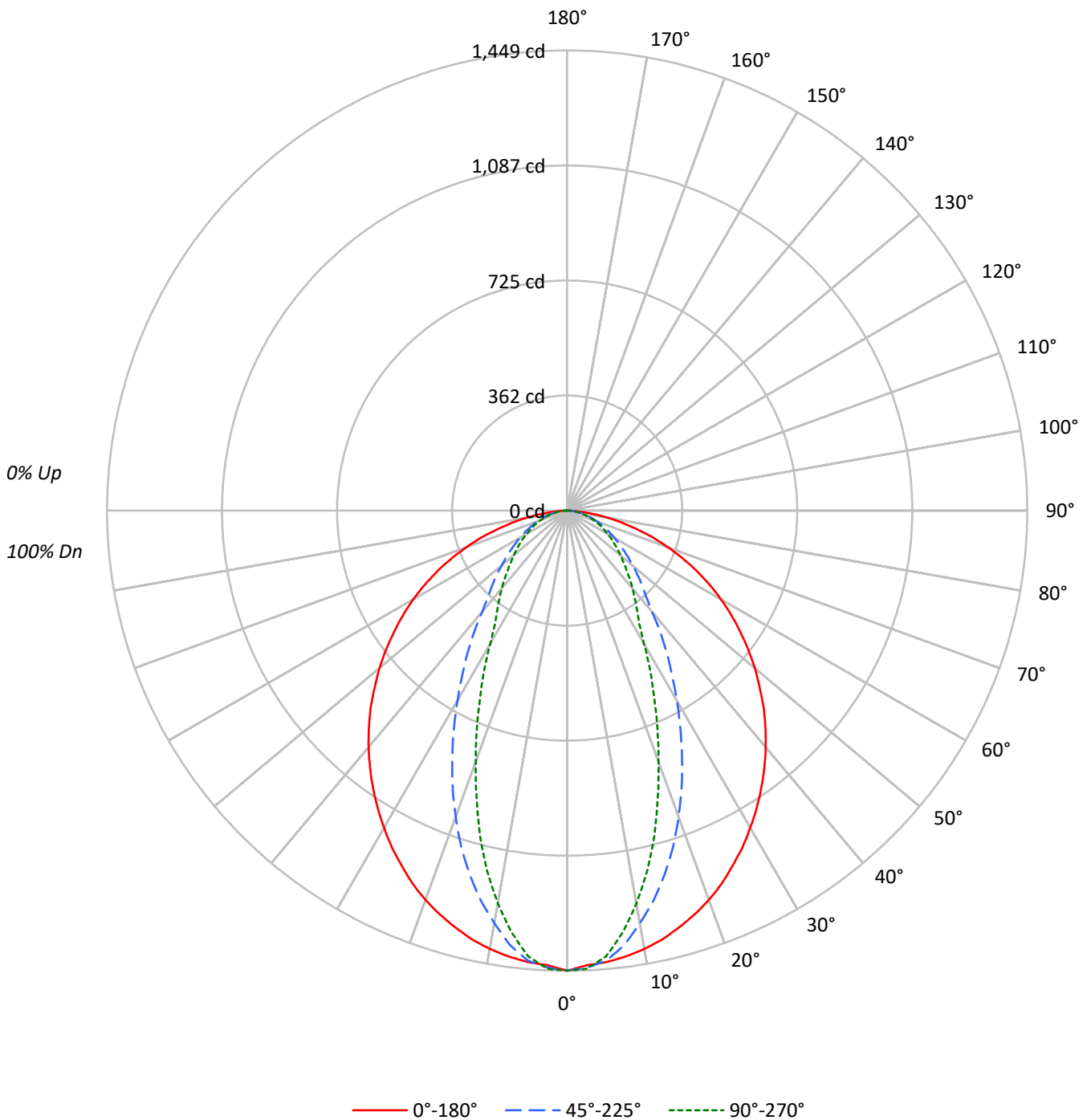
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2191.1 lumens  
Efficiency: N/A  
Efficacy: 63.1 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	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	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	27445	27445	27445
5°	27135	27044	26791
10°	26960	25375	24163
15°	26656	23259	20787
20°	26301	20684	16972
25°	25775	17875	13546
30°	25226	15104	10573
35°	24653	12635	8881
40°	24054	10244	7909
45°	23431	8957	7073
50°	22743	7926	6461
55°	21966	7161	6002
60°	21204	6517	5600
65°	20200	5971	5267
70°	18718	5567	4963
75°	16580	5051	4700
80°	14140	4757	4364
85°	9739	4217	3956

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 23431 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.7	6.1
10°-20°	335.2	15.3
20°-30°	413.0	18.8
30°-40°	396.2	18.1
40°-50°	341.8	15.6
50°-60°	265.1	12.1
60°-70°	181.5	8.3
70°-80°	98.6	4.5
80°-90°	27.0	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°	880.9	40.2
0°-40°	1277.1	58.3
0°-60°	1884.0	86.0
0°-90°	2191.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2191.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1449	1449	1449	1449	1449	
5°	1427	1447	1422	1404	1409	135
15°	1359	1318	1186	1089	1060	383
25°	1233	1101	855	698	648	568
35°	1066	845	546	407	384	667
45°	874	589	334	276	264	674
55°	665	354	217	188	182	595
65°	451	193	133	121	118	445
75°	226	88	69	65	64	243
85°	45	22	19	19	18	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1448.6	1448.6	1448.6	1448.6	1448.6
2.5°	1432.9	1457.1	1440.2	1440.2	1443.8
5°	1426.8	1447.4	1422.0	1403.8	1408.7
7.5°	1415.9	1430.5	1379.6	1340.8	1339.6
10°	1401.4	1402.6	1319.0	1268.2	1256.0
12.5°	1383.2	1363.8	1257.3	1180.9	1162.8
15°	1359.0	1317.8	1185.8	1088.9	1059.8
17.5°	1333.6	1270.6	1109.5	988.4	948.4
20°	1304.5	1213.7	1025.9	887.8	841.8
22.5°	1271.8	1159.1	942.3	790.9	742.5
25°	1233.0	1101.0	855.1	697.7	648.0
27.5°	1195.5	1041.7	771.6	615.3	564.4
30°	1153.1	977.5	690.4	536.6	483.3
32.5°	1110.7	912.1	615.3	461.5	421.5
35°	1065.9	845.4	546.3	407.0	384.0
37.5°	1019.9	780.0	480.9	370.6	350.0
40°	972.6	714.6	414.2	335.5	319.8
42.5°	924.2	650.4	368.2	306.4	291.9
45°	874.5	588.7	334.3	276.2	264.0
47.5°	821.2	526.9	301.6	250.7	239.8
50°	771.6	467.5	268.9	227.7	219.2
52.5°	718.3	409.4	242.2	207.1	199.9
55°	665.0	353.7	216.8	187.7	181.7
57.5°	612.9	300.4	192.6	169.6	164.7
60°	559.6	258.0	172.0	152.6	147.8
62.5°	505.1	224.1	152.6	136.9	132.0
65°	450.6	192.6	133.2	121.1	117.5
67.5°	393.6	162.3	116.3	106.6	104.2
70°	337.9	135.7	100.5	92.1	89.6
72.5°	283.4	110.2	84.8	78.7	76.3
75°	226.5	88.4	69.0	65.4	64.2
77.5°	176.8	69.0	55.7	53.3	52.1
80°	129.6	50.9	43.6	41.2	40.0
82.5°	86.0	35.1	31.5	30.3	29.1
85°	44.8	21.8	19.4	19.4	18.2
87.5°	14.5	9.7	9.7	9.7	8.5
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	21.12	22.59	21.48	22.90	23.21	15.92	17.39	16.29	17.70	18.02
	3H	23.45	24.76	23.82	25.09	25.45	17.57	18.89	17.95	19.22	19.58
	4H	24.34	25.58	24.74	25.93	26.30	18.21	19.44	18.61	19.79	20.17
	6H	25.00	26.14	25.42	26.51	26.90	18.70	19.84	19.11	20.21	20.60
	8H	25.21	26.30	25.64	26.69	27.09	18.87	19.95	19.30	20.34	20.75
	12H	25.33	26.37	25.76	26.75	27.18	18.99	20.02	19.42	20.41	20.84
4H	2H	21.13	22.37	21.53	22.72	23.10	16.64	17.87	17.04	18.22	18.60
	3H	23.54	24.57	23.96	24.97	25.37	18.49	19.51	18.90	19.91	20.31
	4H	24.47	25.40	24.91	25.81	26.25	19.23	20.16	19.67	20.57	21.01
	6H	25.25	26.05	25.71	26.50	26.96	19.85	20.65	20.31	21.09	21.55
	8H	25.52	26.27	25.99	26.72	27.18	20.06	20.81	20.53	21.26	21.73
	12H	25.70	26.37	26.18	26.85	27.32	20.23	20.90	20.71	21.37	21.85
8H	4H	24.47	25.22	24.93	25.66	26.13	19.61	20.36	20.08	20.81	21.27
	6H	25.27	25.89	25.77	26.38	26.86	20.35	20.97	20.85	21.46	21.94
	8H	25.58	26.13	26.09	26.64	27.13	20.65	21.20	21.16	21.71	22.20
	12H	25.81	26.30	26.32	26.79	27.35	20.89	21.38	21.40	21.87	22.44
12H	4H	24.45	25.12	24.93	25.60	26.07	19.67	20.34	20.15	20.82	21.29
	6H	25.25	25.81	25.77	26.32	26.81	20.44	20.99	20.95	21.50	21.99
	8H	25.58	26.07	26.10	26.57	27.13	20.79	21.28	21.30	21.77	22.34