

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: P1055391

Luminaire Tested: S122R3DR-H865D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055391  
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-H865D835-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

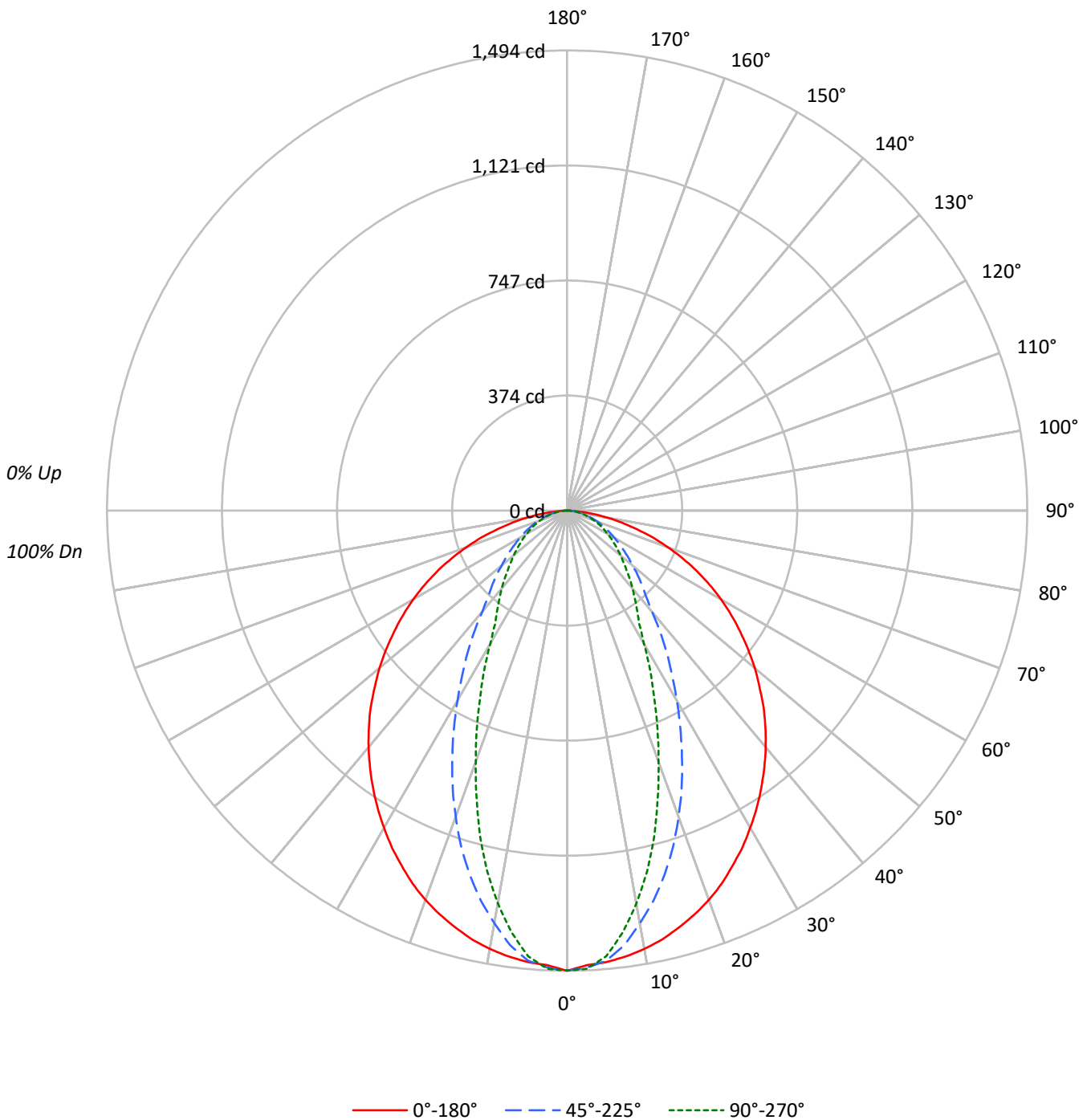
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2259.2 lumens  
Efficiency: N/A  
Efficacy: 73.1 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): 30.9  
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	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				
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°	28298	28298	28298
5°	27978	27883	27622
10°	27797	26164	24915
15°	27483	23980	21432
20°	27118	21327	17498
25°	26576	18431	13966
30°	26009	15572	10901
35°	25418	13026	9157
40°	24801	10563	8154
45°	24160	9236	7293
50°	23447	8170	6661
55°	22646	7382	6187
60°	21864	6718	5775
65°	20828	6160	5429
70°	19299	5744	5118
75°	17092	5212	4846
80°	14576	4910	4495
85°	10043	4348	4065

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24160 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.9	6.1
10°-20°	345.6	15.3
20°-30°	425.8	18.8
30°-40°	408.5	18.1
40°-50°	352.4	15.6
50°-60°	273.4	12.1
60°-70°	187.2	8.3
70°-80°	101.6	4.5
80°-90°	27.9	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°	908.2	40.2
0°-40°	1316.8	58.3
0°-60°	1942.5	86.0
0°-90°	2259.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2259.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1471	1492	1466	1447	1452	140
15°	1401	1359	1223	1123	1093	395
25°	1271	1135	882	719	668	586
35°	1099	872	563	420	396	687
45°	902	607	345	285	272	695
55°	686	365	224	194	187	614
65°	465	199	137	125	121	459
75°	234	91	71	67	66	250
85°	46	22	20	20	19	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1493.6	1493.6	1493.6	1493.6	1493.6
2.5°	1477.4	1502.4	1484.9	1484.9	1488.6
5°	1471.1	1492.4	1466.1	1447.4	1452.4
7.5°	1459.9	1474.9	1422.4	1382.5	1381.2
10°	1444.9	1446.2	1360.0	1307.5	1295.1
12.5°	1426.2	1406.2	1296.3	1217.6	1198.9
15°	1401.2	1358.7	1222.6	1122.7	1092.7
17.5°	1375.0	1310.0	1143.9	1019.1	977.8
20°	1345.0	1251.3	1057.8	915.4	867.9
22.5°	1311.3	1195.1	971.6	815.5	765.5
25°	1271.3	1135.2	881.7	719.3	668.1
27.5°	1232.6	1074.0	795.5	634.4	582.0
30°	1188.9	1007.8	711.8	553.2	498.3
32.5°	1145.2	940.4	634.4	475.8	434.6
35°	1099.0	871.7	563.2	419.6	395.9
37.5°	1051.5	804.3	495.8	382.1	360.9
40°	1002.8	736.8	427.1	345.9	329.7
42.5°	952.9	670.6	379.6	316.0	301.0
45°	901.7	606.9	344.7	284.7	272.2
47.5°	846.7	543.2	311.0	258.5	247.3
50°	795.5	482.1	277.2	234.8	226.0
52.5°	740.6	422.1	249.8	213.6	206.1
55°	685.6	364.7	223.5	193.6	187.3
57.5°	631.9	309.7	198.6	174.8	169.8
60°	577.0	266.0	177.3	157.4	152.4
62.5°	520.8	231.0	157.4	141.1	136.1
65°	464.6	198.6	137.4	124.9	121.1
67.5°	405.9	167.3	119.9	109.9	107.4
70°	348.4	139.9	103.7	94.9	92.4
72.5°	292.2	113.6	87.4	81.2	78.7
75°	233.5	91.2	71.2	67.4	66.2
77.5°	182.3	71.2	57.4	54.9	53.7
80°	133.6	52.5	45.0	42.5	41.2
82.5°	88.7	36.2	32.5	31.2	30.0
85°	46.2	22.5	20.0	20.0	18.7
87.5°	15.0	10.0	10.0	10.0	8.7
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	21.22	22.69	21.59	23.00	23.32	16.03	17.50	16.39	17.81	18.12
	3H	23.55	24.87	23.93	25.20	25.56	17.68	18.99	18.05	19.32	19.68
	4H	24.45	25.68	24.85	26.03	26.41	18.31	19.54	18.71	19.89	20.27
	6H	25.11	26.25	25.52	26.62	27.01	18.80	19.94	19.22	20.31	20.70
	8H	25.32	26.40	25.75	26.79	27.19	18.97	20.06	19.40	20.45	20.85
	12H	25.43	26.47	25.86	26.85	27.28	19.09	20.13	19.52	20.51	20.94
4H	2H	21.24	22.47	21.64	22.82	23.20	16.74	17.98	17.14	18.33	18.71
	3H	23.65	24.68	24.06	25.08	25.48	18.59	19.62	19.00	20.02	20.42
	4H	24.58	25.50	25.01	25.92	26.36	19.34	20.26	19.77	20.68	21.12
	6H	25.36	26.16	25.82	26.60	27.06	19.95	20.76	20.41	21.20	21.66
	8H	25.63	26.38	26.09	26.82	27.29	20.17	20.92	20.63	21.36	21.83
	12H	25.81	26.47	26.29	26.95	27.43	20.33	21.00	20.81	21.48	21.95
8H	4H	24.57	25.32	25.04	25.77	26.24	19.72	20.47	20.18	20.91	21.38
	6H	25.38	26.00	25.88	26.49	26.97	20.46	21.07	20.95	21.57	22.04
	8H	25.68	26.24	26.20	26.75	27.24	20.75	21.30	21.27	21.82	22.30
	12H	25.91	26.40	26.42	26.90	27.46	20.99	21.48	21.51	21.98	22.54
12H	4H	24.55	25.22	25.04	25.70	26.17	19.77	20.44	20.26	20.92	21.39
	6H	25.36	25.91	25.87	26.42	26.91	20.54	21.10	21.06	21.61	22.10
	8H	25.69	26.18	26.20	26.67	27.24	20.90	21.39	21.41	21.88	22.45