

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



Scaled data based on original data using
LM-79-2019 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-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
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-FLL-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

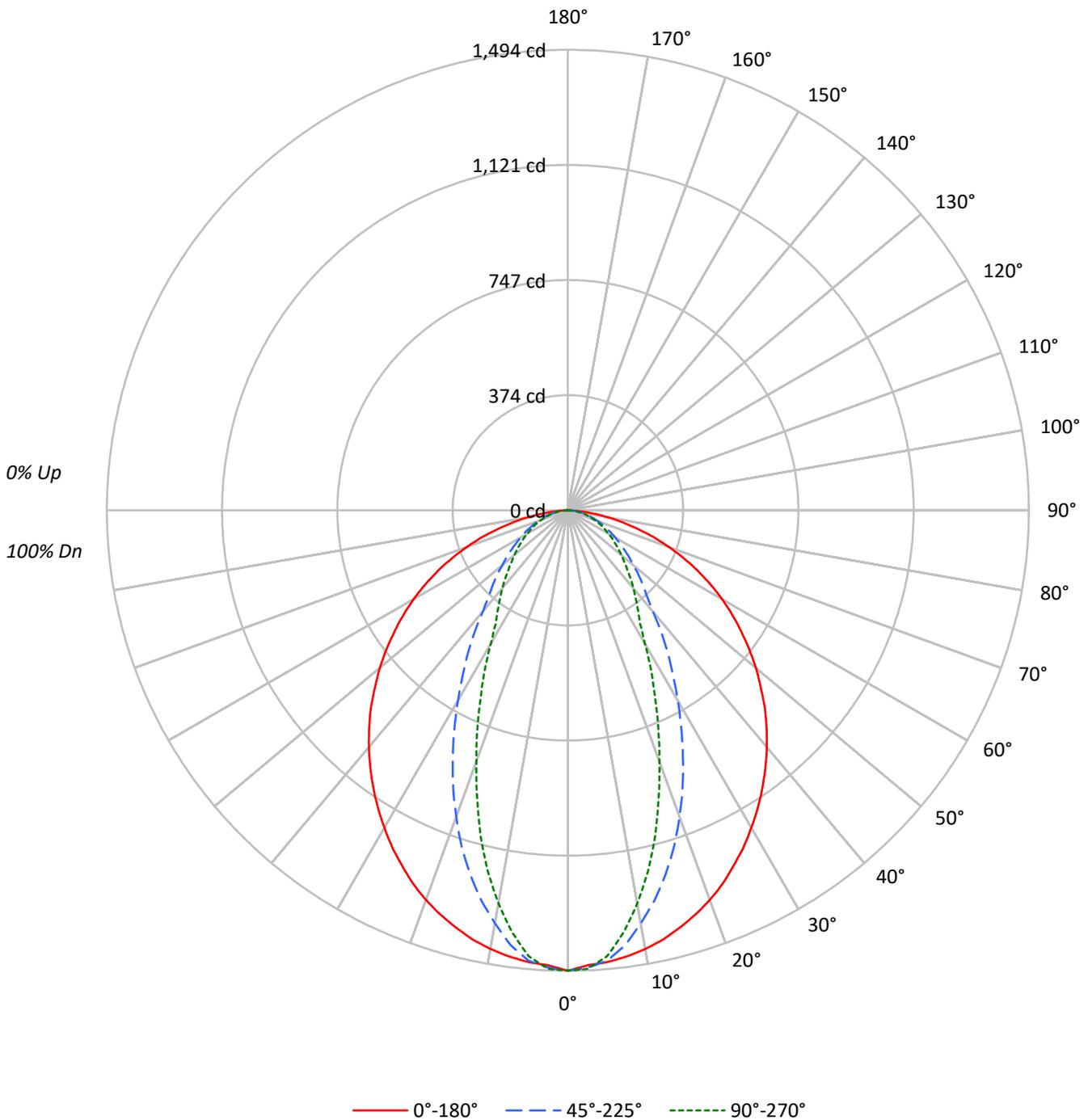
Lumens per Lamp: N/A
Luminaire Lumens: 2259.2 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	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