

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: P1055388

Luminaire Tested: S122R3DR-H865D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055388
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-H865D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

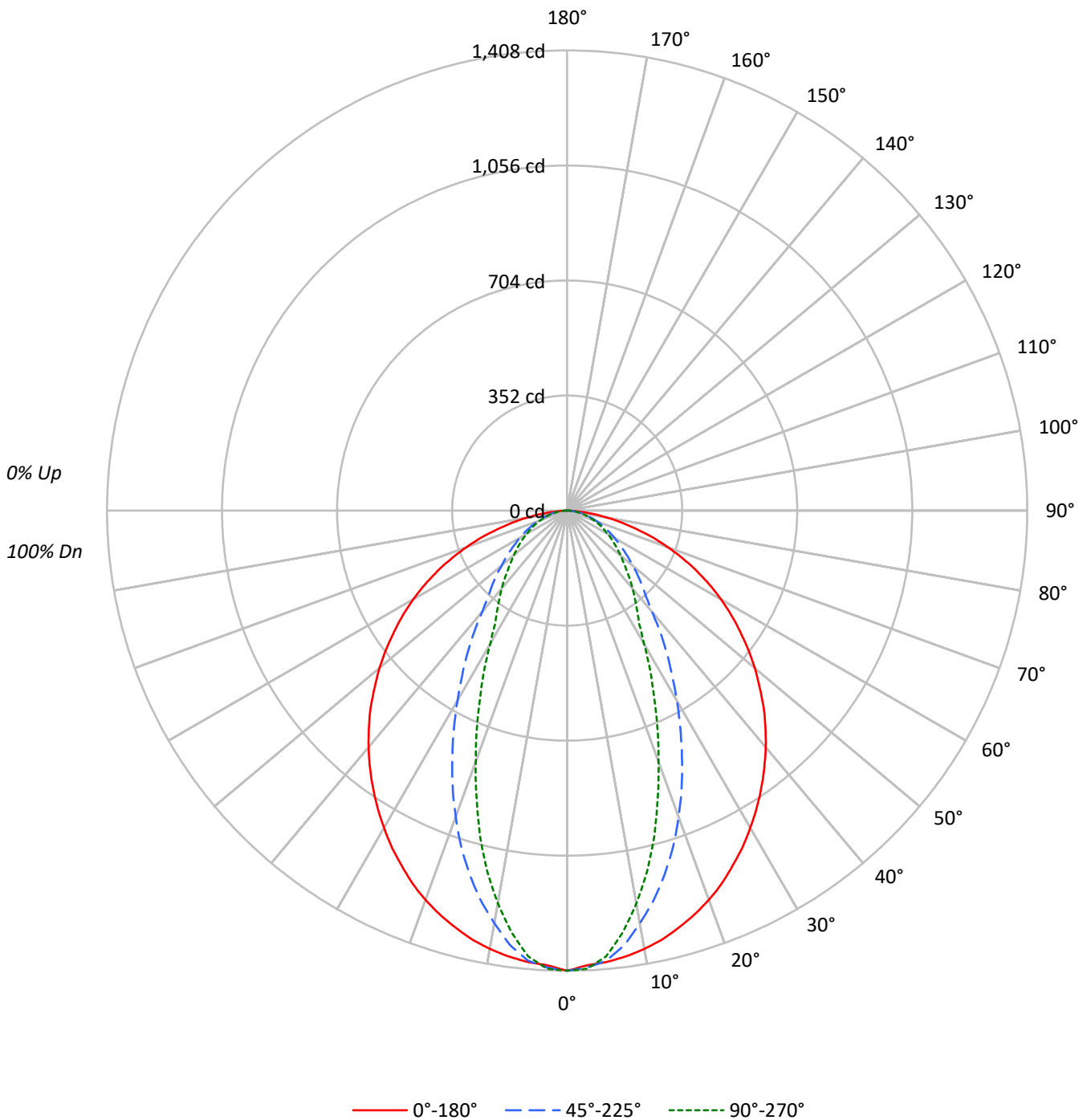
Lumens per Lamp: N/A
Luminaire Lumens: 2129.4 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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				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°	26672	26672	26672
5°	26371	26281	26036
10°	26200	24661	23482
15°	25904	22603	20203
20°	25559	20101	16494
25°	25050	17372	13164
30°	24515	14677	10276
35°	23957	12279	8629
40°	23377	9957	7687
45°	22772	8705	6875
50°	22100	7702	6281
55°	21345	6960	5833
60°	20606	6332	5441
65°	19631	5805	5120
70°	18191	5412	4825
75°	16112	4912	4568
80°	13736	4626	4233
85°	9478	4087	3848

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.0	6.1
10°-20°	325.7	15.3
20°-30°	401.3	18.8
30°-40°	385.1	18.1
40°-50°	332.1	15.6
50°-60°	257.7	12.1
60°-70°	176.4	8.3
70°-80°	95.8	4.5
80°-90°	26.2	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°	856.1	40.2
0°-40°	1241.1	58.3
0°-60°	1830.9	86.0
0°-90°	2129.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2129.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1408	1408	1408	1408	1408	
5°	1387	1407	1382	1364	1369	132
15°	1321	1281	1152	1058	1030	372
25°	1198	1070	831	678	630	552
35°	1036	822	531	396	373	648
45°	850	572	325	268	257	655
55°	646	344	211	182	177	578
65°	438	187	130	118	114	432
75°	220	86	67	64	62	236
85°	44	21	19	19	18	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1407.8	1407.8	1407.8	1407.8	1407.8
2.5°	1392.5	1416.0	1399.6	1399.6	1403.1
5°	1386.6	1406.6	1381.9	1364.2	1369.0
7.5°	1376.0	1390.1	1340.7	1303.0	1301.9
10°	1361.9	1363.1	1281.9	1232.4	1220.6
12.5°	1344.2	1325.4	1221.8	1147.7	1130.0
15°	1320.7	1280.7	1152.4	1058.2	1030.0
17.5°	1296.0	1234.8	1078.2	960.5	921.7
20°	1267.7	1179.4	997.0	862.8	818.1
22.5°	1235.9	1126.5	915.8	768.6	721.6
25°	1198.3	1070.0	831.0	678.0	629.7
27.5°	1161.8	1012.3	749.8	598.0	548.5
30°	1120.6	949.9	670.9	521.5	469.7
32.5°	1079.4	886.3	598.0	448.5	409.6
35°	1035.8	821.6	530.9	395.5	373.1
37.5°	991.1	758.0	467.3	360.2	340.2
40°	945.2	694.5	402.6	326.1	310.8
42.5°	898.1	632.1	357.8	297.8	283.7
45°	849.9	572.1	324.9	268.4	256.6
47.5°	798.1	512.0	293.1	243.7	233.1
50°	749.8	454.4	261.3	221.3	213.1
52.5°	698.0	397.9	235.4	201.3	194.2
55°	646.2	343.7	210.7	182.4	176.6
57.5°	595.6	291.9	187.2	164.8	160.1
60°	543.8	250.7	167.1	148.3	143.6
62.5°	490.8	217.8	148.3	133.0	128.3
65°	437.9	187.2	129.5	117.7	114.2
67.5°	382.6	157.7	113.0	103.6	101.2
70°	328.4	131.8	97.7	89.5	87.1
72.5°	275.4	107.1	82.4	76.5	74.2
75°	220.1	85.9	67.1	63.6	62.4
77.5°	171.9	67.1	54.1	51.8	50.6
80°	125.9	49.4	42.4	40.0	38.8
82.5°	83.6	34.1	30.6	29.4	28.3
85°	43.6	21.2	18.8	18.8	17.7
87.5°	14.1	9.4	9.4	9.4	8.2
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	21.02	22.49	21.38	22.80	23.11	15.82	17.29	16.19	17.60	17.92
	3H	23.35	24.66	23.72	24.99	25.35	17.47	18.79	17.85	19.12	19.48
	4H	24.24	25.48	24.64	25.83	26.21	18.11	19.34	18.51	19.69	20.07
	6H	24.90	26.04	25.32	26.41	26.80	18.60	19.74	19.01	20.11	20.50
	8H	25.11	26.20	25.54	26.59	26.99	18.77	19.85	19.20	20.24	20.65
	12H	25.23	26.27	25.66	26.65	27.08	18.89	19.92	19.32	20.31	20.74
4H	2H	21.03	22.27	21.43	22.62	23.00	16.54	17.77	16.94	18.12	18.50
	3H	23.45	24.47	23.86	24.87	25.27	18.39	19.41	18.80	19.81	20.21
	4H	24.37	25.30	24.81	25.71	26.15	19.13	20.06	19.57	20.47	20.91
	6H	25.15	25.95	25.61	26.40	26.86	19.75	20.55	20.21	20.99	21.46
	8H	25.42	26.17	25.89	26.62	27.09	19.96	20.71	20.43	21.16	21.63
	12H	25.60	26.27	26.08	26.75	27.22	20.13	20.80	20.61	21.27	21.75
8H	4H	24.37	25.12	24.83	25.56	26.03	19.51	20.26	19.98	20.71	21.17
	6H	25.18	25.79	25.67	26.29	26.76	20.25	20.87	20.75	21.36	21.84
	8H	25.48	26.03	25.99	26.54	27.03	20.55	21.10	21.06	21.61	22.10
	12H	25.71	26.20	26.22	26.69	27.26	20.79	21.28	21.30	21.77	22.34
12H	4H	24.35	25.02	24.83	25.50	25.97	19.57	20.24	20.05	20.72	21.19
	6H	25.15	25.71	25.67	26.22	26.71	20.34	20.89	20.85	21.40	21.89
	8H	25.49	25.97	26.00	26.47	27.03	20.69	21.18	21.20	21.67	22.24