

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: P1055295

Luminaire Tested: S122R3DR-H1005D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055295
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-H1005D930-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, 90 CRI LEDS
Ballast/Driver: -

Summary

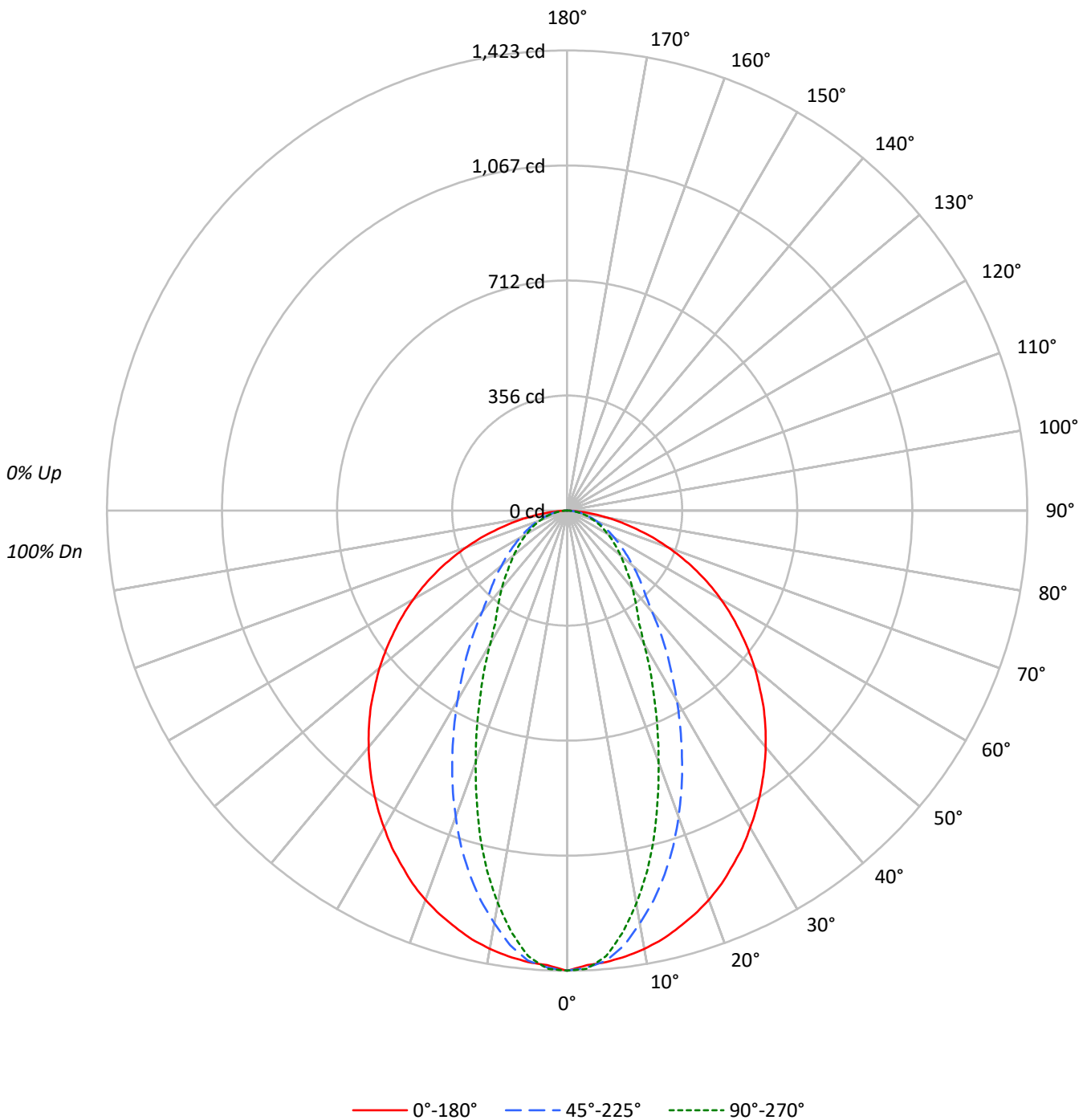
Lumens per Lamp: N/A
Luminaire Lumens: 2151.7 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (Ain): 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°	26952	26952	26952
5°	26646	26557	26308
10°	26476	24919	23728
15°	26175	22839	20412
20°	25827	20311	16668
25°	25311	17553	13301
30°	24771	14832	10383
35°	24209	12406	8719
40°	23622	10061	7766
45°	23010	8796	6948
50°	22333	7784	6346
55°	21569	7032	5893
60°	20821	6400	5498
65°	19837	5864	5173
70°	18380	5467	4875
75°	16280	4963	4612
80°	13889	4670	4288
85°	9565	4130	3869

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23010 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.4	6.1
10°-20°	329.1	15.3
20°-30°	405.6	18.8
30°-40°	389.1	18.1
40°-50°	335.6	15.6
50°-60°	260.4	12.1
60°-70°	178.3	8.3
70°-80°	96.8	4.5
80°-90°	26.5	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°	865.0	40.2
0°-40°	1254.1	58.3
0°-60°	1850.1	86.0
0°-90°	2151.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2151.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1401	1421	1396	1378	1383	133
15°	1334	1294	1164	1069	1041	376
25°	1211	1081	840	685	636	558
35°	1047	830	536	400	377	655
45°	859	578	328	271	259	662
55°	653	347	213	184	178	584
65°	442	189	131	119	115	437
75°	222	87	68	64	63	238
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°	1422.6	1422.6	1422.6	1422.6	1422.6
2.5°	1407.1	1430.9	1414.2	1414.2	1417.8
5°	1401.1	1421.4	1396.4	1378.5	1383.3
7.5°	1390.4	1404.7	1354.8	1316.7	1315.5
10°	1376.2	1377.4	1295.3	1245.3	1233.4
12.5°	1358.3	1339.3	1234.6	1159.7	1141.8
15°	1334.5	1294.1	1164.4	1069.3	1040.7
17.5°	1309.6	1247.7	1089.5	970.6	931.3
20°	1281.0	1191.8	1007.4	871.8	826.7
22.5°	1248.9	1138.3	925.4	776.7	729.1
25°	1210.8	1081.2	839.7	685.1	636.3
27.5°	1174.0	1022.9	757.7	604.2	554.3
30°	1132.3	959.9	678.0	526.9	474.6
32.5°	1090.7	895.6	604.2	453.2	413.9
35°	1046.7	830.2	536.4	399.6	377.0
37.5°	1001.5	766.0	472.2	364.0	343.7
40°	955.1	701.8	406.8	329.5	314.0
42.5°	907.5	638.7	361.6	300.9	286.7
45°	858.8	578.1	328.3	271.2	259.3
47.5°	806.4	517.4	296.2	246.2	235.5
50°	757.7	459.1	264.1	223.6	215.3
52.5°	705.3	402.0	237.9	203.4	196.3
55°	653.0	347.3	212.9	184.4	178.4
57.5°	601.8	295.0	189.1	166.5	161.8
60°	549.5	253.3	168.9	149.9	145.1
62.5°	496.0	220.0	149.9	134.4	129.6
65°	442.5	189.1	130.8	118.9	115.4
67.5°	386.6	159.4	114.2	104.7	102.3
70°	331.8	133.2	98.7	90.4	88.0
72.5°	278.3	108.2	83.3	77.3	74.9
75°	222.4	86.8	67.8	64.2	63.0
77.5°	173.7	67.8	54.7	52.3	51.1
80°	127.3	50.0	42.8	40.4	39.3
82.5°	84.4	34.5	30.9	29.7	28.5
85°	44.0	21.4	19.0	19.0	17.8
87.5°	14.3	9.5	9.5	9.5	8.3
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	21.05	22.52	21.42	22.84	23.15	15.86	17.33	16.22	17.64	17.95
	3H	23.38	24.70	23.76	25.03	25.39	17.51	18.82	17.89	19.15	19.51
	4H	24.28	25.51	24.68	25.86	26.24	18.14	19.38	18.54	19.72	20.10
	6H	24.94	26.08	25.35	26.45	26.84	18.63	19.77	19.05	20.14	20.53
	8H	25.15	26.23	25.58	26.62	27.03	18.80	19.89	19.23	20.28	20.68
	12H	25.26	26.30	25.70	26.68	27.11	18.92	19.96	19.35	20.34	20.77
4H	2H	21.07	22.30	21.47	22.65	23.03	16.57	17.81	16.97	18.16	18.54
	3H	23.48	24.51	23.89	24.91	25.31	18.42	19.45	18.83	19.85	20.25
	4H	24.41	25.33	24.84	25.75	26.19	19.17	20.09	19.60	20.51	20.95
	6H	25.19	25.99	25.65	26.43	26.90	19.78	20.59	20.24	21.03	21.49
	8H	25.46	26.21	25.92	26.65	27.12	20.00	20.75	20.46	21.19	21.66
	12H	25.64	26.31	26.12	26.78	27.26	20.16	20.83	20.64	21.31	21.78
8H	4H	24.40	25.15	24.87	25.60	26.07	19.55	20.30	20.01	20.74	21.21
	6H	25.21	25.83	25.71	26.32	26.80	20.29	20.90	20.78	21.40	21.87
	8H	25.51	26.07	26.03	26.58	27.07	20.58	21.13	21.10	21.64	22.13
	12H	25.74	26.23	26.26	26.73	27.29	20.82	21.31	21.33	21.80	22.37
12H	4H	24.38	25.05	24.87	25.53	26.00	19.61	20.27	20.09	20.75	21.22
	6H	25.19	25.74	25.70	26.25	26.74	20.37	20.93	20.89	21.44	21.93
	8H	25.52	26.01	26.03	26.50	27.07	20.73	21.22	21.24	21.71	22.27