

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: P1055288

Luminaire Tested: S122R3DR-H1005D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055288
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H1005D850-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

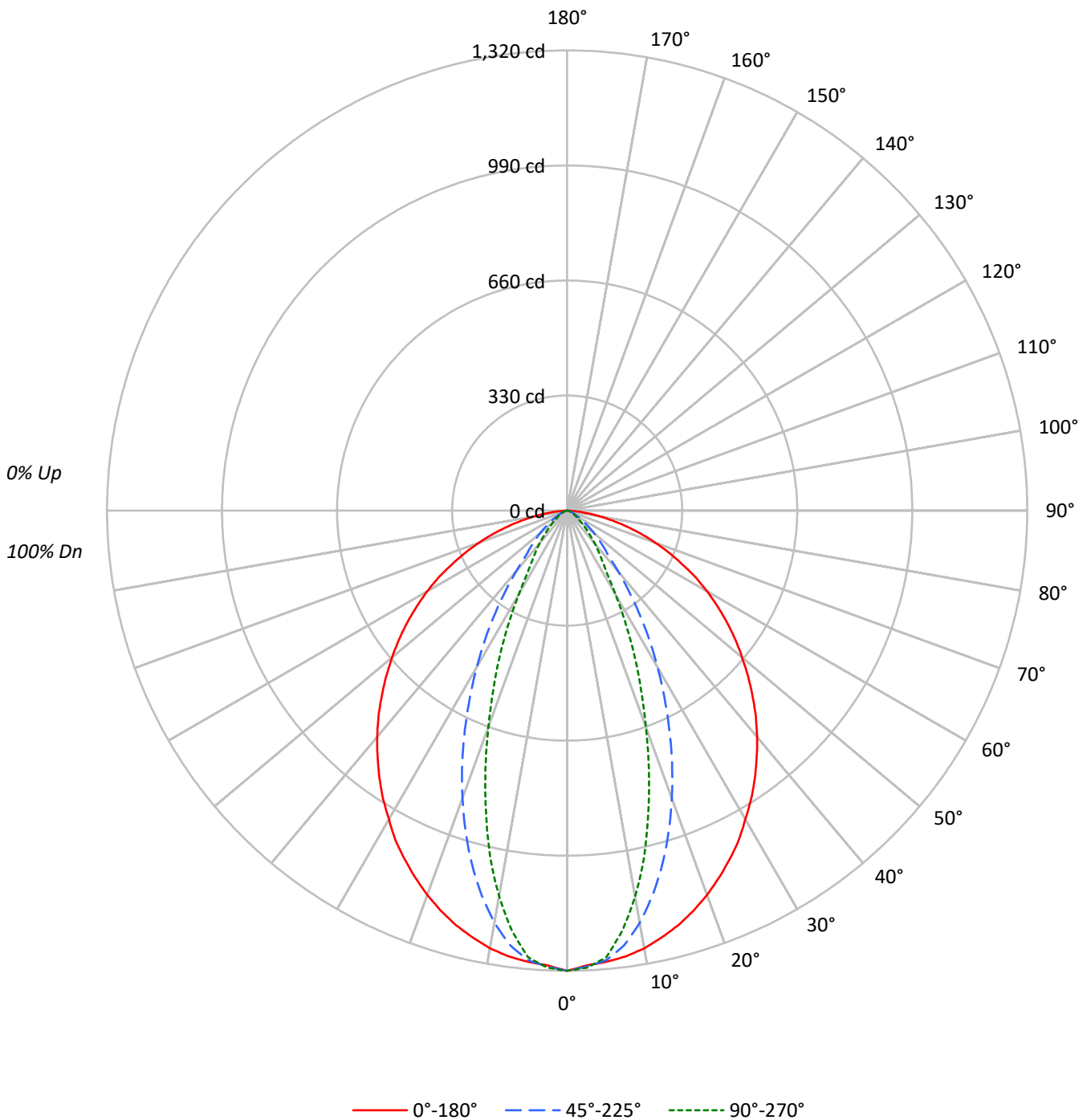
Lumens per Lamp: N/A
Luminaire Lumens: 1513.0 lumens
Efficiency: N/A
Efficacy: 41.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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	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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71				71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58				58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53				53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49				49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45				45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25012	25012	25012
5°	24708	24615	24461
10°	24527	23095	21631
15°	24149	20660	17645
20°	23650	17712	13309
25°	23066	14510	9503
30°	22369	11326	6053
35°	21704	8308	4041
40°	20968	5602	3042
45°	20157	3944	2168
50°	19312	3003	1527
55°	18491	2084	1123
60°	17593	1410	921
65°	16318	1018	726
70°	14879	809	626
75°	12913	710	476
80°	10234	535	535
85°	5630	696	348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	8.0
10°-20°	296.3	19.6
20°-30°	338.4	22.4
30°-40°	287.0	19.0
40°-50°	214.2	14.2
50°-60°	138.4	9.1
60°-70°	77.2	5.1
70°-80°	33.9	2.2
80°-90°	7.0	0.5
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°	755.4	49.9
0°-40°	1042.4	68.9
0°-60°	1394.9	92.2
0°-90°	1513.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1513.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1320	1320	1320	1320	1320	
5°	1299	1315	1294	1281	1286	123
15°	1231	1200	1053	942	900	347
25°	1103	974	694	508	455	508
35°	938	707	359	196	175	587
45°	752	446	147	96	81	580
55°	560	212	63	39	34	501
65°	364	78	23	18	16	362
75°	176	16	10	8	6	188
85°	26	2	3	2	2	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1320.2	1320.2	1320.2	1320.2	1320.2
2.5°	1305.6	1325.1	1308.9	1308.9	1312.1
5°	1299.2	1315.4	1294.3	1281.4	1286.2
7.5°	1289.5	1300.8	1257.1	1218.3	1215.0
10°	1274.9	1279.8	1200.5	1140.6	1124.4
12.5°	1253.9	1242.5	1130.9	1046.8	1019.3
15°	1231.2	1200.5	1053.3	941.6	899.6
17.5°	1203.7	1148.7	967.5	831.6	779.8
20°	1173.0	1095.3	878.5	716.7	660.1
22.5°	1139.0	1035.5	786.3	608.3	551.7
25°	1103.4	974.0	694.1	508.0	454.6
27.5°	1066.2	909.3	603.5	417.4	359.2
30°	1022.5	842.9	517.7	330.1	276.7
32.5°	982.1	773.4	438.5	255.6	210.3
35°	938.4	707.0	359.2	195.8	174.7
37.5°	893.1	640.7	289.6	165.0	147.2
40°	847.8	574.4	226.5	139.1	123.0
42.5°	800.9	509.6	174.7	116.5	100.3
45°	752.3	446.5	147.2	95.5	80.9
47.5°	703.8	383.4	123.0	76.0	64.7
50°	655.2	323.6	101.9	59.9	51.8
52.5°	608.3	267.0	80.9	48.5	42.1
55°	559.8	211.9	63.1	38.8	34.0
57.5°	511.3	165.0	48.5	32.4	29.1
60°	464.3	124.6	37.2	25.9	24.3
62.5°	415.8	100.3	29.1	21.0	19.4
65°	364.0	77.7	22.7	17.8	16.2
67.5°	317.1	56.6	17.8	14.6	12.9
70°	268.6	38.8	14.6	12.9	11.3
72.5°	221.7	24.3	11.3	9.7	9.7
75°	176.4	16.2	9.7	8.1	6.5
77.5°	134.3	9.7	6.5	6.5	4.9
80°	93.8	6.5	4.9	4.9	4.9
82.5°	58.2	4.9	3.2	3.2	3.2
85°	25.9	1.6	3.2	1.6	1.6
87.5°	4.9	1.6	1.6	1.6	1.6
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	19.44	20.76	19.80	21.07	21.38	5.75	7.07	6.12	7.39	7.70
	3H	21.91	23.08	22.29	23.41	23.77	6.60	7.77	6.98	8.10	8.47
	4H	22.86	23.95	23.27	24.31	24.69	6.87	7.97	7.28	8.32	8.70
	6H	23.55	24.55	23.96	24.92	25.32	7.07	8.07	7.49	8.44	8.84
	8H	23.74	24.70	24.17	25.09	25.49	7.14	8.09	7.57	8.49	8.89
	12H	23.83	24.74	24.26	25.12	25.55	7.17	8.08	7.60	8.46	8.89
4H	2H	19.22	20.31	19.62	20.66	21.05	6.33	7.42	6.73	7.77	8.15
	3H	21.71	22.60	22.12	23.00	23.41	7.35	8.25	7.77	8.65	9.06
	4H	22.65	23.45	23.08	23.87	24.31	7.72	8.52	8.16	8.94	9.38
	6H	23.40	24.09	23.87	24.54	25.01	8.02	8.71	8.48	9.16	9.62
	8H	23.65	24.29	24.12	24.74	25.21	8.12	8.76	8.59	9.21	9.68
	12H	23.78	24.34	24.26	24.83	25.30	8.16	8.73	8.65	9.21	9.69
8H	4H	22.52	23.16	22.99	23.61	24.08	8.09	8.74	8.56	9.19	9.66
	6H	23.26	23.78	23.76	24.28	24.76	8.46	8.99	8.96	9.48	9.96
	8H	23.50	23.97	24.02	24.49	24.98	8.60	9.07	9.12	9.58	10.08
	12H	23.65	24.06	24.17	24.56	25.13	8.68	9.09	9.19	9.59	10.16
12H	4H	22.47	23.04	22.96	23.52	24.00	8.22	8.78	8.70	9.27	9.74
	6H	23.19	23.67	23.72	24.18	24.67	8.58	9.05	9.10	9.57	10.06
	8H	23.46	23.87	23.97	24.37	24.94	8.76	9.17	9.27	9.66	10.24