

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: P1055411

Luminaire Tested: S122R3DR-H865D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055411
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-H865D950-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, 90 CRI LEDS
Ballast/Driver: -

Summary

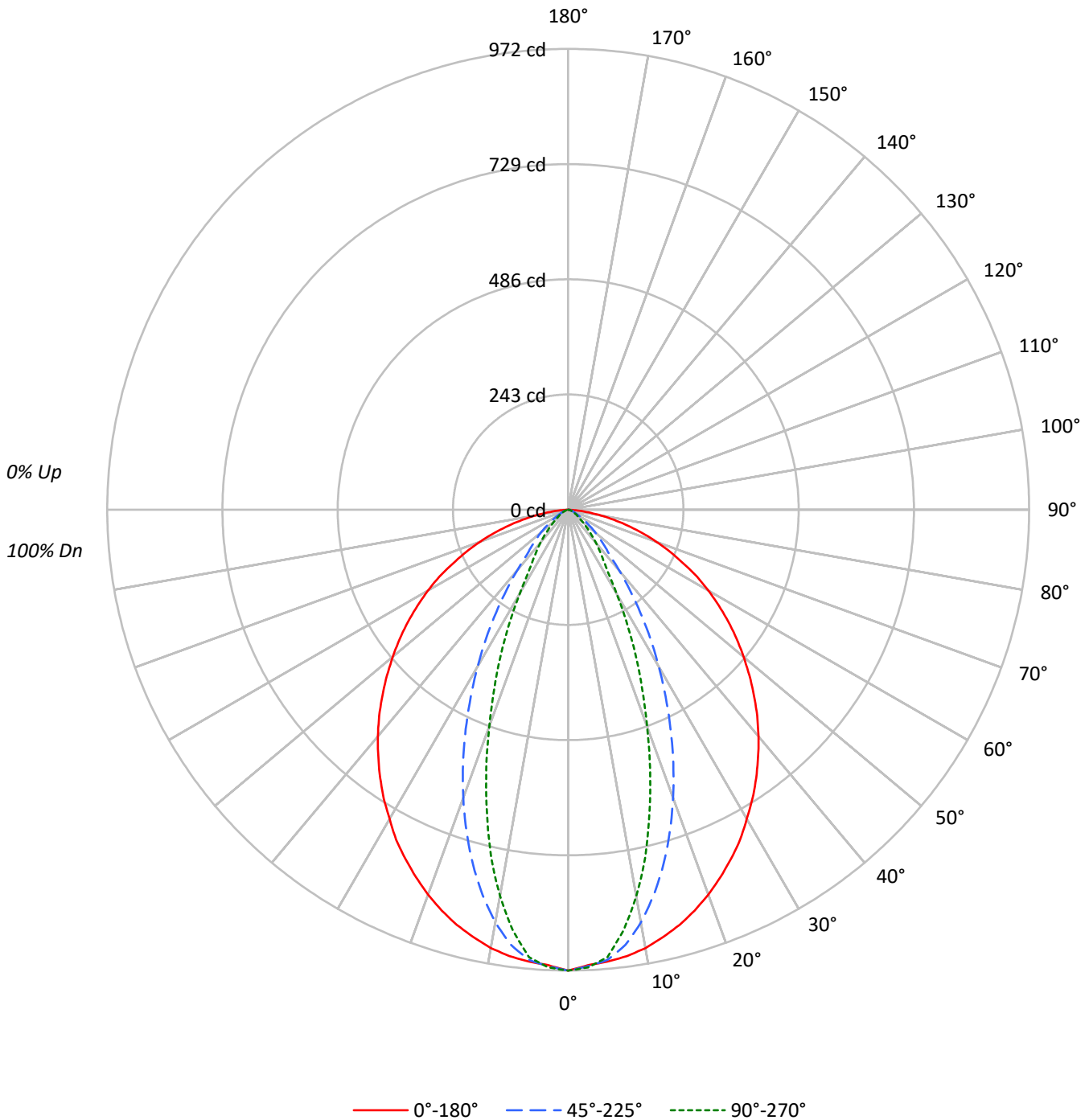
Lumens per Lamp: N/A
Luminaire Lumens: 1114.2 lumens
Efficiency: N/A
Efficacy: 36.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18419	18419	18419
5°	18195	18126	18014
10°	18061	17006	15929
15°	17784	15213	12992
20°	17416	13043	9801
25°	16985	10684	6999
30°	16473	8339	4456
35°	15982	6118	2977
40°	15440	4125	2238
45°	14844	2904	1597
50°	14221	2214	1123
55°	13615	1536	826
60°	12955	1038	678
65°	12019	749	533
70°	10957	593	460
75°	9509	520	351
80°	7539	393	393
85°	4152	522	261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14844 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.9	8.0
10°-20°	218.2	19.6
20°-30°	249.2	22.4
30°-40°	211.3	19.0
40°-50°	157.7	14.2
50°-60°	101.9	9.1
60°-70°	56.8	5.1
70°-80°	24.9	2.2
80°-90°	5.2	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°	556.3	49.9
0°-40°	767.6	68.9
0°-60°	1027.2	92.2
0°-90°	1114.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1114.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	957	969	953	944	947	91
15°	907	884	776	693	662	255
25°	812	717	511	374	335	374
35°	691	521	264	144	129	432
45°	554	329	108	70	60	427
55°	412	156	46	29	25	369
65°	268	57	17	13	12	267
75°	130	12	7	6	5	138
85°	19	1	2	1	1	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	972.2	972.2	972.2	972.2	972.2
2.5°	961.5	975.8	963.8	963.8	966.2
5°	956.7	968.6	953.1	943.6	947.2
7.5°	949.5	957.9	925.7	897.1	894.7
10°	938.8	942.4	884.0	839.9	828.0
12.5°	923.3	915.0	832.8	770.8	750.6
15°	906.7	884.0	775.6	693.4	662.4
17.5°	886.4	845.9	712.5	612.4	574.3
20°	863.8	806.6	646.9	527.8	486.1
22.5°	838.7	762.5	579.0	448.0	406.3
25°	812.5	717.2	511.1	374.1	334.8
27.5°	785.1	669.6	444.4	307.4	264.5
30°	753.0	620.7	381.2	243.0	203.7
32.5°	723.2	569.5	322.9	188.2	154.9
35°	691.0	520.6	264.5	144.2	128.7
37.5°	657.7	471.8	213.3	121.5	108.4
40°	624.3	422.9	166.8	102.5	90.5
42.5°	589.7	375.3	128.7	85.8	73.9
45°	554.0	328.8	108.4	70.3	59.6
47.5°	518.3	282.4	90.5	56.0	47.7
50°	482.5	238.3	75.1	44.1	38.1
52.5°	448.0	196.6	59.6	35.7	31.0
55°	412.2	156.1	46.5	28.6	25.0
57.5°	376.5	121.5	35.7	23.8	21.4
60°	341.9	91.7	27.4	19.1	17.9
62.5°	306.2	73.9	21.4	15.5	14.3
65°	268.1	57.2	16.7	13.1	11.9
67.5°	233.5	41.7	13.1	10.7	9.5
70°	197.8	28.6	10.7	9.5	8.3
72.5°	163.2	17.9	8.3	7.1	7.1
75°	129.9	11.9	7.1	6.0	4.8
77.5°	98.9	7.1	4.8	4.8	3.6
80°	69.1	4.8	3.6	3.6	3.6
82.5°	42.9	3.6	2.4	2.4	2.4
85°	19.1	1.2	2.4	1.2	1.2
87.5°	3.6	1.2	1.2	1.2	1.2
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	18.37	19.69	18.74	20.01	20.32	4.68	6.00	5.04	6.31	6.62
	3H	20.84	22.01	21.22	22.34	22.71	5.52	6.69	5.90	7.02	7.39
	4H	21.80	22.89	22.20	23.24	23.63	5.80	6.89	6.20	7.24	7.62
	6H	22.49	23.49	22.90	23.86	24.25	5.99	7.00	6.41	7.37	7.76
	8H	22.68	23.63	23.11	24.02	24.43	6.07	7.02	6.50	7.41	7.82
	12H	22.76	23.67	23.20	24.06	24.49	6.10	7.01	6.53	7.39	7.82
4H	2H	18.16	19.25	18.56	19.60	19.98	5.25	6.34	5.65	6.69	7.08
	3H	20.64	21.54	21.05	21.94	22.34	6.28	7.17	6.69	7.58	7.98
	4H	21.59	22.39	22.02	22.81	23.25	6.65	7.45	7.08	7.87	8.31
	6H	22.34	23.03	22.80	23.48	23.94	6.95	7.64	7.41	8.08	8.55
	8H	22.58	23.23	23.05	23.68	24.15	7.05	7.69	7.52	8.14	8.61
	12H	22.71	23.28	23.20	23.77	24.24	7.09	7.66	7.58	8.15	8.62
8H	4H	21.45	22.10	21.92	22.54	23.02	7.02	7.67	7.49	8.11	8.58
	6H	22.19	22.72	22.69	23.21	23.69	7.39	7.91	7.89	8.41	8.89
	8H	22.44	22.91	22.96	23.42	23.92	7.53	8.00	8.05	8.52	9.01
	12H	22.59	23.00	23.10	23.50	24.07	7.62	8.03	8.13	8.52	9.10
12H	4H	21.41	21.98	21.89	22.46	22.93	7.14	7.71	7.63	8.20	8.67
	6H	22.13	22.60	22.65	23.12	23.61	7.51	7.98	8.03	8.49	8.99
	8H	22.40	22.81	22.91	23.31	23.88	7.69	8.11	8.21	8.60	9.17