

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: P1055294

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055294
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-H1005D930-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

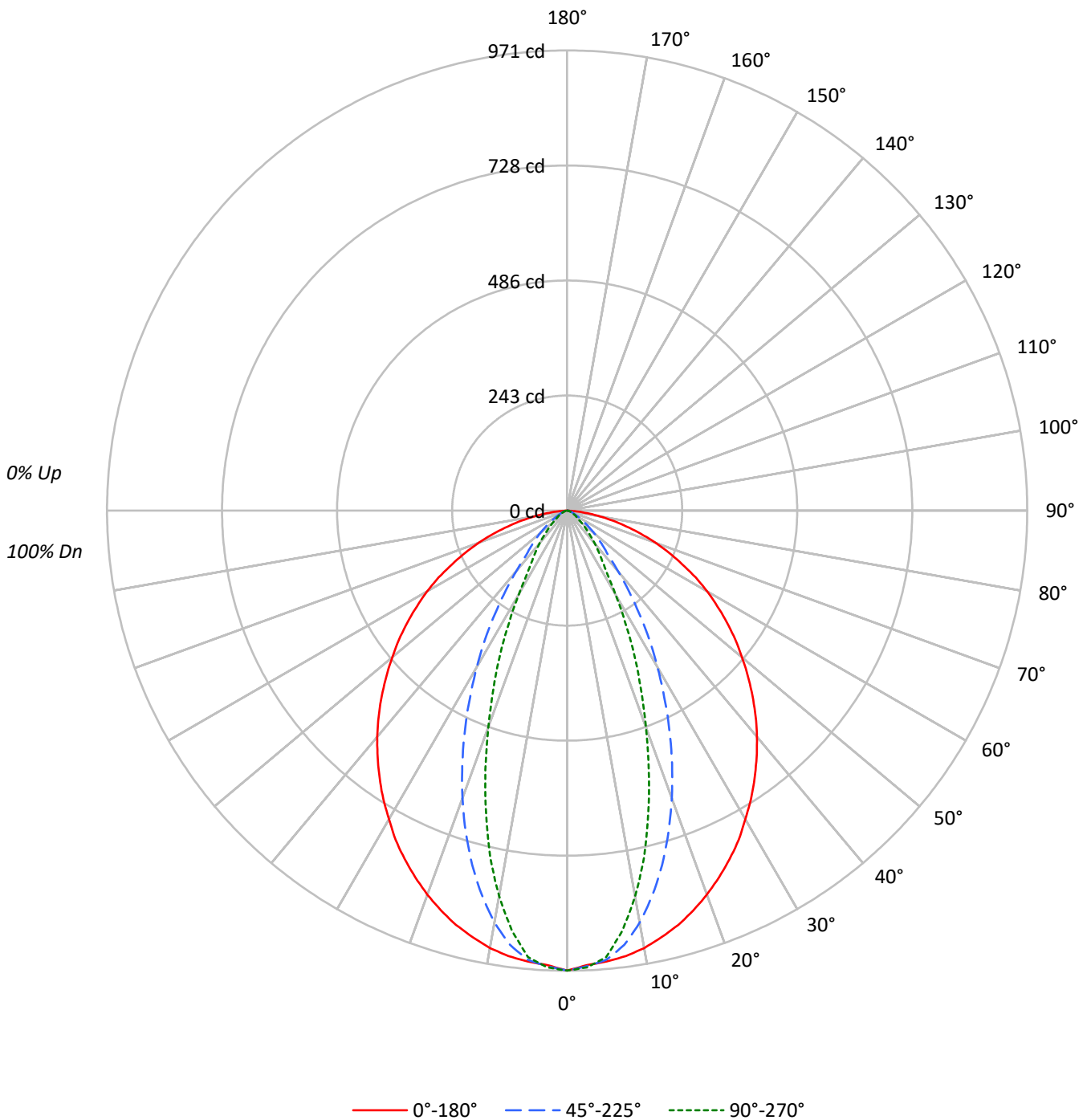
Lumens per Lamp: N/A
Luminaire Lumens: 1112.3 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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°	18389	18389	18389
5°	18164	18096	17984
10°	18032	16980	15902
15°	17755	15187	12971
20°	17385	13022	9784
25°	16958	10668	6986
30°	16445	8326	4450
35°	15956	6108	2972
40°	15415	4118	2236
45°	14819	2899	1594
50°	14198	2208	1123
55°	13592	1533	826
60°	12936	1038	674
65°	11996	749	533
70°	10935	593	460
75°	9487	520	351
80°	7528	393	393
85°	4130	522	261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14819 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	8.0
10°-20°	217.8	19.6
20°-30°	248.8	22.4
30°-40°	211.0	19.0
40°-50°	157.4	14.2
50°-60°	101.7	9.1
60°-70°	56.7	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°	555.3	49.9
0°-40°	766.3	68.9
0°-60°	1025.5	92.2
0°-90°	1112.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1112.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	955	967	952	942	946	91
15°	905	883	774	692	661	255
25°	811	716	510	374	334	373
35°	690	520	264	144	128	431
45°	553	328	108	70	60	427
55°	412	156	46	28	25	368
65°	268	57	17	13	12	266
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°	970.6	970.6	970.6	970.6	970.6
2.5°	959.9	974.1	962.2	962.2	964.6
5°	955.1	967.0	951.5	942.0	945.6
7.5°	948.0	956.3	924.2	895.6	893.3
10°	937.3	940.8	882.6	838.5	826.6
12.5°	921.8	913.5	831.4	769.6	749.3
15°	905.2	882.6	774.3	692.2	661.3
17.5°	884.9	844.5	711.3	611.4	573.3
20°	862.3	805.2	645.9	526.9	485.3
22.5°	837.4	761.2	578.1	447.2	405.6
25°	811.2	716.0	510.3	373.5	334.2
27.5°	783.8	668.5	443.7	306.9	264.1
30°	751.7	619.7	380.6	242.6	203.4
32.5°	722.0	568.5	322.3	187.9	154.6
35°	689.9	519.8	264.1	143.9	128.5
37.5°	656.6	471.0	212.9	121.3	108.2
40°	623.3	422.2	166.5	102.3	90.4
42.5°	588.8	374.7	128.5	85.6	73.7
45°	553.1	328.3	108.2	70.2	59.5
47.5°	517.4	281.9	90.4	55.9	47.6
50°	481.7	237.9	74.9	44.0	38.1
52.5°	447.2	196.3	59.5	35.7	30.9
55°	411.5	155.8	46.4	28.5	25.0
57.5°	375.9	121.3	35.7	23.8	21.4
60°	341.4	91.6	27.4	19.0	17.8
62.5°	305.7	73.7	21.4	15.5	14.3
65°	267.6	57.1	16.7	13.1	11.9
67.5°	233.1	41.6	13.1	10.7	9.5
70°	197.4	28.5	10.7	9.5	8.3
72.5°	163.0	17.8	8.3	7.1	7.1
75°	129.6	11.9	7.1	5.9	4.8
77.5°	98.7	7.1	4.8	4.8	3.6
80°	69.0	4.8	3.6	3.6	3.6
82.5°	42.8	3.6	2.4	2.4	2.4
85°	19.0	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	18.73	20.00	20.31	4.68	6.00	5.04	6.31	6.63
	3H	20.84	22.01	21.22	22.34	22.70	5.53	6.70	5.91	7.03	7.39
	4H	21.79	22.88	22.19	23.24	23.62	5.80	6.89	6.20	7.24	7.63
	6H	22.48	23.48	22.89	23.85	24.25	6.00	7.00	6.41	7.37	7.76
	8H	22.67	23.63	23.11	24.02	24.42	6.07	7.02	6.50	7.41	7.82
	12H	22.76	23.67	23.19	24.05	24.48	6.10	7.01	6.53	7.39	7.82
4H	2H	18.15	19.24	18.56	19.60	19.98	5.25	6.35	5.66	6.70	7.08
	3H	20.64	21.53	21.05	21.93	22.34	6.28	7.18	6.69	7.58	7.98
	4H	21.58	22.38	22.01	22.80	23.24	6.65	7.45	7.08	7.87	8.31
	6H	22.33	23.02	22.80	23.47	23.94	6.95	7.64	7.41	8.08	8.55
	8H	22.58	23.22	23.05	23.67	24.14	7.05	7.69	7.52	8.14	8.61
	12H	22.71	23.27	23.19	23.76	24.23	7.09	7.66	7.58	8.14	8.62
8H	4H	21.45	22.09	21.92	22.54	23.01	7.02	7.66	7.49	8.11	8.58
	6H	22.19	22.71	22.69	23.21	23.69	7.39	7.91	7.89	8.41	8.89
	8H	22.43	22.90	22.95	23.42	23.91	7.53	8.00	8.05	8.51	9.01
	12H	22.58	22.99	23.10	23.49	24.06	7.61	8.03	8.13	8.52	9.09
12H	4H	21.40	21.97	21.89	22.45	22.93	7.14	7.71	7.63	8.19	8.67
	6H	22.12	22.60	22.65	23.11	23.60	7.51	7.98	8.03	8.49	8.98
	8H	22.39	22.80	22.90	23.30	23.87	7.69	8.10	8.20	8.60	9.17