

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: P1055325

Luminaire Tested: S122R3DR-H290D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055325
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-H290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

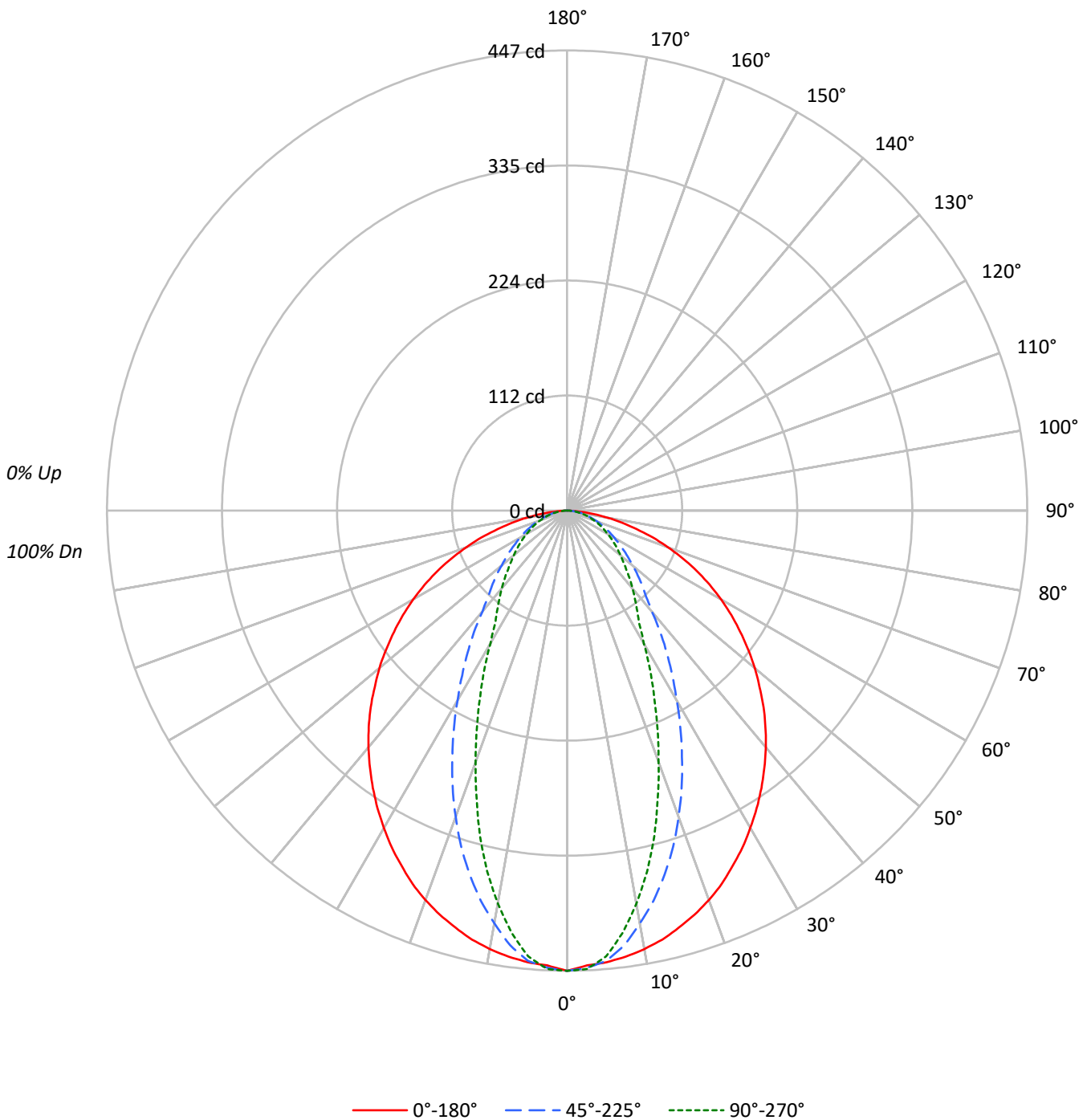
Lumens per Lamp: N/A
Luminaire Lumens: 676.3 lumens
Efficiency: N/A
Efficacy: 57.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	8471	8471	8471
5°	8376	8347	8269
10°	8320	7832	7459
15°	8226	7179	6416
20°	8117	6383	5238
25°	7956	5517	4181
30°	7786	4662	3264
35°	7609	3899	2741
40°	7425	3163	2441
45°	7232	2765	2184
50°	7018	2446	1995
55°	6778	2210	1853
60°	6544	2012	1728
65°	6236	1843	1627
70°	5778	1717	1534
75°	5117	1559	1449
80°	4364	1473	1342
85°	3000	1304	1217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7232 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.0	6.1
10°-20°	103.4	15.3
20°-30°	127.5	18.8
30°-40°	122.3	18.1
40°-50°	105.5	15.6
50°-60°	81.8	12.1
60°-70°	56.0	8.3
70°-80°	30.4	4.5
80°-90°	8.3	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°	271.9	40.2
0°-40°	394.2	58.3
0°-60°	581.5	86.0
0°-90°	676.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	676.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	440	447	439	433	435	42
15°	419	407	366	336	327	118
25°	381	340	264	215	200	175
35°	329	261	169	126	118	206
45°	270	182	103	85	82	208
55°	205	109	67	58	56	184
65°	139	59	41	37	36	137
75°	70	27	21	20	20	75
85°	14	7	6	6	6	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	447.1	447.1	447.1	447.1	447.1
2.5°	442.3	449.7	444.5	444.5	445.6
5°	440.4	446.7	438.9	433.3	434.8
7.5°	437.0	441.5	425.8	413.8	413.5
10°	432.5	432.9	407.1	391.4	387.7
12.5°	426.9	420.9	388.0	364.5	358.9
15°	419.4	406.7	366.0	336.1	327.1
17.5°	411.6	392.2	342.4	305.1	292.7
20°	402.6	374.6	316.6	274.0	259.8
22.5°	392.5	357.8	290.8	244.1	229.2
25°	380.6	339.8	263.9	215.3	200.0
27.5°	369.0	321.5	238.1	189.9	174.2
30°	355.9	301.7	213.1	165.6	149.2
32.5°	342.8	281.5	189.9	142.4	130.1
35°	329.0	260.9	168.6	125.6	118.5
37.5°	314.8	240.8	148.4	114.4	108.0
40°	300.2	220.6	127.9	103.6	98.7
42.5°	285.2	200.8	113.6	94.6	90.1
45°	269.9	181.7	103.2	85.2	81.5
47.5°	253.5	162.6	93.1	77.4	74.0
50°	238.1	144.3	83.0	70.3	67.7
52.5°	221.7	126.4	74.8	63.9	61.7
55°	205.2	109.2	66.9	57.9	56.1
57.5°	189.2	92.7	59.4	52.3	50.8
60°	172.7	79.6	53.1	47.1	45.6
62.5°	155.9	69.2	47.1	42.2	40.7
65°	139.1	59.4	41.1	37.4	36.3
67.5°	121.5	50.1	35.9	32.9	32.2
70°	104.3	41.9	31.0	28.4	27.7
72.5°	87.5	34.0	26.2	24.3	23.6
75°	69.9	27.3	21.3	20.2	19.8
77.5°	54.6	21.3	17.2	16.4	16.1
80°	40.0	15.7	13.5	12.7	12.3
82.5°	26.5	10.8	9.7	9.3	9.0
85°	13.8	6.7	6.0	6.0	5.6
87.5°	4.5	3.0	3.0	3.0	2.6
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	17.03	18.50	17.40	18.81	19.13	11.83	13.30	12.20	13.61	13.93
	3H	19.36	20.68	19.74	21.01	21.37	13.48	14.80	13.86	15.13	15.49
	4H	20.26	21.49	20.66	21.84	22.22	14.12	15.35	14.52	15.70	16.08
	6H	20.92	22.06	21.33	22.43	22.82	14.61	15.75	15.03	16.12	16.51
	8H	21.13	22.21	21.55	22.60	23.00	14.78	15.87	15.21	16.26	16.66
	12H	21.24	22.28	21.67	22.66	23.09	14.90	15.94	15.33	16.32	16.75
4H	2H	17.05	18.28	17.45	18.63	19.01	12.55	13.78	12.95	14.13	14.51
	3H	19.46	20.49	19.87	20.89	21.29	14.40	15.42	14.81	15.83	16.23
	4H	20.39	21.31	20.82	21.73	22.17	15.15	16.07	15.58	16.49	16.93
	6H	21.17	21.97	21.63	22.41	22.87	15.76	16.56	16.22	17.01	17.47
	8H	21.44	22.19	21.90	22.63	23.10	15.98	16.73	16.44	17.17	17.64
	12H	21.61	22.28	22.10	22.76	23.23	16.14	16.81	16.62	17.29	17.76
8H	4H	20.38	21.13	20.85	21.58	22.05	15.53	16.28	15.99	16.72	17.19
	6H	21.19	21.81	21.69	22.30	22.78	16.26	16.88	16.76	17.37	17.85
	8H	21.49	22.05	22.01	22.56	23.05	16.56	17.11	17.07	17.62	18.11
	12H	21.72	22.21	22.23	22.70	23.27	16.80	17.29	17.31	17.78	18.35
12H	4H	20.36	21.03	20.85	21.51	21.98	15.58	16.25	16.07	16.73	17.20
	6H	21.17	21.72	21.68	22.23	22.72	16.35	16.90	16.86	17.41	17.90
	8H	21.50	21.99	22.01	22.48	23.05	16.70	17.19	17.22	17.69	18.25