

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: P1055326

Luminaire Tested: S122R3DR-H290D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055326
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H290D940-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

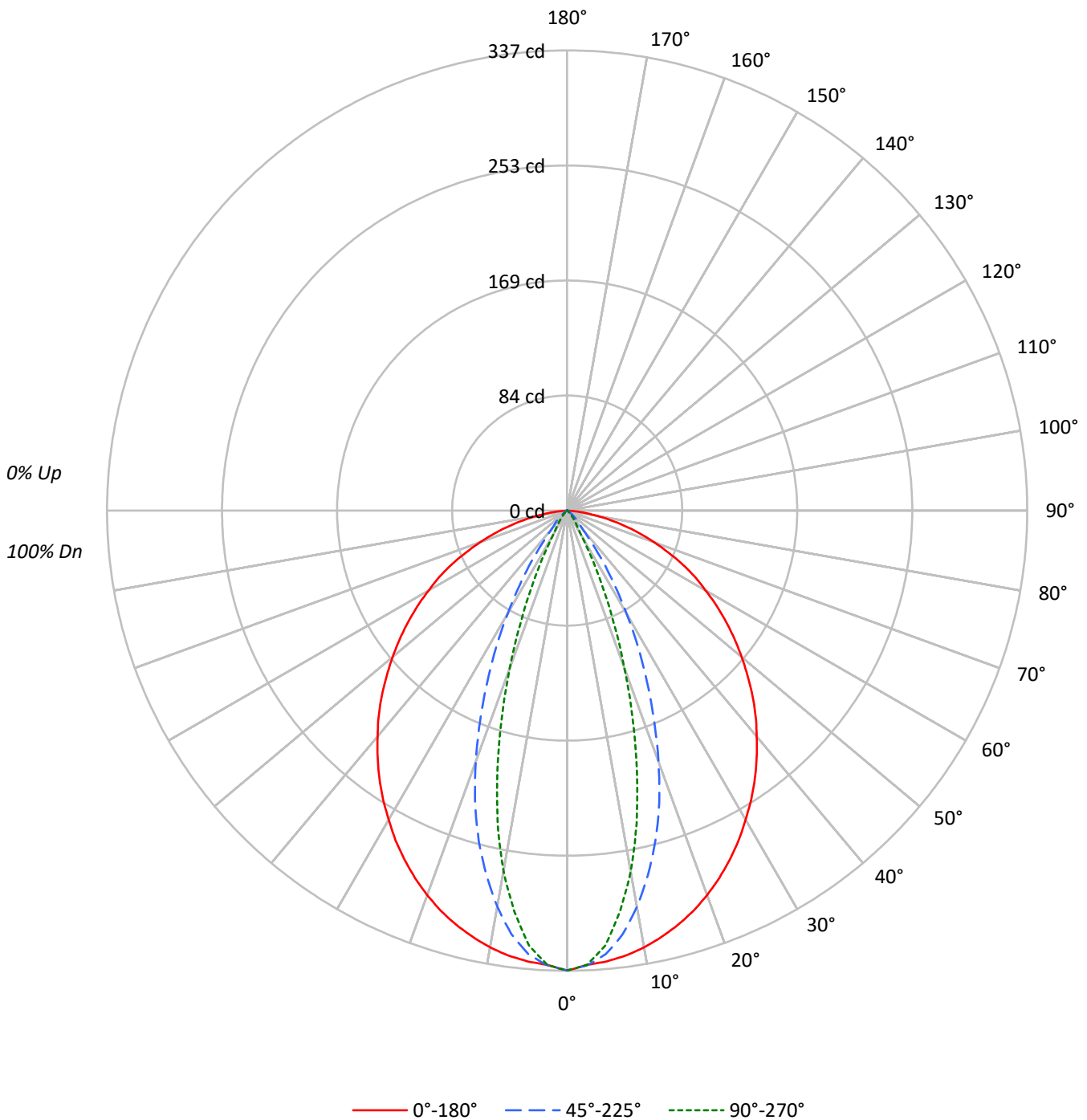
Lumens per Lamp: N/A
Luminaire Lumens: 306.5 lumens
Efficiency: N/A
Efficacy: 26.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6381	6381	6381
5°	6303	6200	6082
10°	6249	5668	5162
15°	6159	4906	3866
20°	6042	3942	2474
25°	5893	2889	1271
30°	5716	1888	416
35°	5544	1048	243
40°	5342	420	134
45°	5144	281	51
50°	4919	159	24
55°	4694	76	13
60°	4445	30	0
65°	4183	18	0
70°	3756	22	0
75°	3228	29	0
80°	2455	0	0
85°	1000	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5144 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	9.9
10°-20°	70.2	22.9
20°-30°	71.2	23.2
30°-40°	53.5	17.4
40°-50°	37.4	12.2
50°-60°	22.9	7.5
60°-70°	13.6	4.5
70°-80°	6.3	2.1
80°-90°	1.1	0.4
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°	171.6	56.0
0°-40°	225.0	73.4
0°-60°	285.4	93.1
0°-90°	306.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	306.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	337	337	337	337	337	
5°	331	334	326	320	320	31
15°	314	297	250	212	197	88
25°	282	232	138	79	61	130
35°	240	156	45	14	10	150
45°	192	82	10	3	2	148
55°	142	25	2	1	0	127
65°	93	7	0	0	0	92
75°	44	1	0	0	0	47
85°	5	0	0	0	0	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	336.8	336.8	336.8	336.8	336.8
2.5°	333.0	338.0	333.4	332.6	333.0
5°	331.4	334.5	326.0	319.8	319.8
7.5°	328.7	328.7	312.8	300.1	296.2
10°	324.8	320.6	294.6	274.1	268.3
12.5°	319.8	309.7	273.3	244.3	235.0
15°	314.0	297.0	250.1	211.8	197.1
17.5°	307.4	282.6	224.2	176.6	159.5
20°	299.7	267.2	195.5	140.5	122.7
22.5°	291.2	250.1	166.5	108.4	89.4
25°	281.9	232.3	138.2	79.0	60.8
27.5°	272.2	213.7	112.3	54.2	37.2
30°	261.3	194.4	86.3	32.1	19.0
32.5°	250.9	175.8	64.7	17.4	13.9
35°	239.7	156.0	45.3	13.6	10.5
37.5°	228.0	137.4	27.9	10.1	7.7
40°	216.0	118.5	17.0	7.4	5.4
42.5°	204.4	100.7	13.6	5.0	3.5
45°	192.0	82.5	10.5	3.1	1.9
47.5°	179.3	65.8	7.7	1.9	1.2
50°	166.9	51.1	5.4	1.2	0.8
52.5°	154.5	37.6	3.5	0.8	0.4
55°	142.1	25.2	2.3	0.8	0.4
57.5°	129.7	17.8	1.5	0.4	0.4
60°	117.3	13.9	0.8	0.4	0.0
62.5°	105.7	10.8	0.8	0.4	0.4
65°	93.3	7.4	0.4	0.4	0.0
67.5°	80.1	4.6	0.4	0.4	0.0
70°	67.8	2.7	0.4	0.4	0.0
72.5°	55.8	1.5	0.4	0.4	0.0
75°	44.1	0.8	0.4	0.4	0.0
77.5°	32.9	0.4	0.0	0.4	0.0
80°	22.5	0.0	0.0	0.4	0.0
82.5°	13.2	0.0	0.0	0.4	0.0
85°	4.6	0.0	0.4	0.4	0.0
87.5°	0.0	0.0	0.4	0.4	0.0
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	12.65	13.91	13.01	14.22	14.54	0.00	0.00	0.00	0.00	0.00
	3H	16.39	17.51	16.77	17.84	18.20	0.00	0.00	0.00	0.00	0.00
	4H	17.70	18.74	18.10	19.09	19.48	0.00	0.00	0.00	0.00	0.00
	6H	18.56	19.51	18.97	19.88	20.28	0.00	0.00	0.00	0.00	0.00
	8H	18.77	19.68	19.20	20.07	20.47	0.00	0.00	0.00	0.00	0.00
	12H	18.84	19.70	19.27	20.08	20.51	0.00	0.00	0.00	0.00	0.00
4H	2H	12.40	13.44	12.81	13.79	14.18	0.00	0.00	0.00	0.00	0.00
	3H	16.14	17.00	16.56	17.40	17.80	0.00	0.00	0.00	0.00	0.00
	4H	17.44	18.20	17.87	18.62	19.07	0.00	0.00	0.00	0.00	0.00
	6H	18.36	19.02	18.82	19.46	19.93	0.00	0.00	0.00	0.00	0.00
	8H	18.62	19.23	19.09	19.68	20.15	0.00	0.00	0.00	0.00	0.00
	12H	18.72	19.26	19.21	19.74	20.22	0.00	0.00	0.00	0.00	0.00
8H	4H	17.29	17.91	17.76	18.35	18.83	0.00	0.00	0.00	0.00	0.00
	6H	18.20	18.69	18.70	19.19	19.67	0.00	0.00	0.00	0.00	0.00
	8H	18.46	18.90	18.98	19.42	19.91	0.00	0.00	0.00	0.00	0.00
	12H	18.57	18.96	19.09	19.46	20.03	0.00	0.00	0.00	0.00	0.00
12H	4H	17.25	17.78	17.73	18.27	18.74	0.00	0.00	0.00	0.00	0.00
	6H	18.13	18.58	18.66	19.09	19.59	0.00	0.00	0.00	0.00	0.00
	8H	18.41	18.80	18.93	19.30	19.87	0.00	0.00	0.00	0.00	0.00