

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: P1055329

Luminaire Tested: S122R3DR-H290D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055329
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-H290D950-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

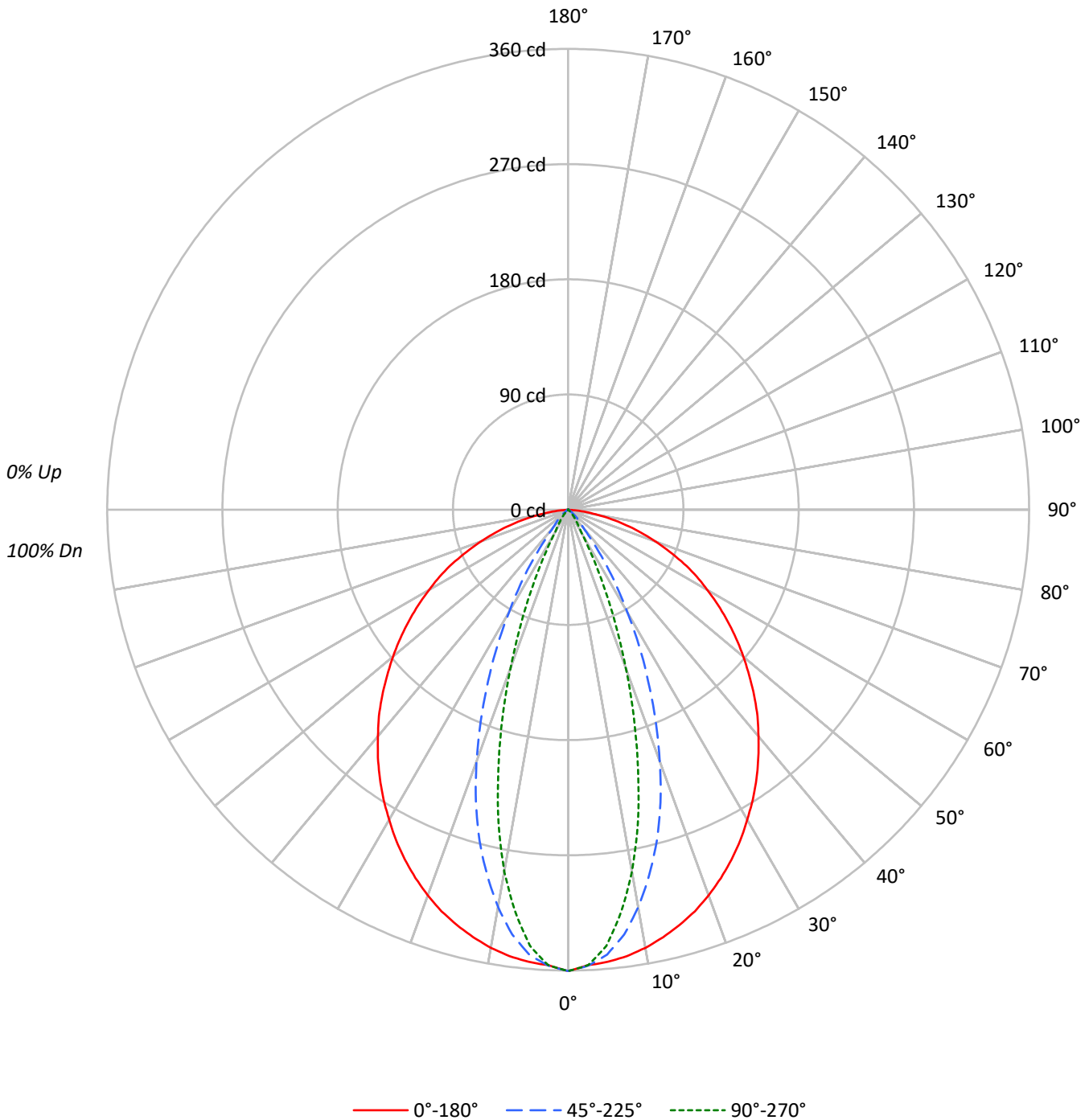
Lumens per Lamp: N/A
Luminaire Lumens: 327.8 lumens
Efficiency: N/A
Efficacy: 28.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (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	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	63	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	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6828	6828	6828
5°	6744	6634	6506
10°	6685	6064	5523
15°	6588	5249	4135
20°	6464	4218	2647
25°	6305	3092	1359
30°	6117	2021	444
35°	5930	1122	259
40°	5716	450	143
45°	5506	300	56
50°	5261	171	24
55°	5021	83	13
60°	4755	30	0
65°	4474	18	0
70°	4016	22	0
75°	3455	29	0
80°	2619	0	0
85°	1087	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5506 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	9.9
10°-20°	75.1	22.9
20°-30°	76.2	23.2
30°-40°	57.2	17.4
40°-50°	40.0	12.2
50°-60°	24.5	7.5
60°-70°	14.6	4.5
70°-80°	6.7	2.1
80°-90°	1.2	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°	183.6	56.0
0°-40°	240.8	73.4
0°-60°	305.3	93.1
0°-90°	327.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	327.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	360	360	360	360	360	
5°	355	358	349	342	342	34
15°	336	318	268	227	211	95
25°	302	248	148	84	65	139
35°	256	167	48	14	11	160
45°	206	88	11	3	2	158
55°	152	27	2	1	0	136
65°	100	8	0	0	0	98
75°	47	1	0	0	0	50
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°	360.4	360.4	360.4	360.4	360.4
2.5°	356.2	361.6	356.6	355.8	356.2
5°	354.6	357.9	348.8	342.1	342.1
7.5°	351.7	351.7	334.7	321.0	316.9
10°	347.5	343.0	315.2	293.3	287.1
12.5°	342.1	331.4	292.4	261.4	251.4
15°	335.9	317.7	267.6	226.6	210.8
17.5°	328.9	302.4	239.8	188.9	170.7
20°	320.6	285.8	209.2	150.4	131.3
22.5°	311.5	267.6	178.1	116.0	95.7
25°	301.6	248.5	147.9	84.5	65.0
27.5°	291.2	228.7	120.1	58.0	39.8
30°	279.6	207.9	92.4	34.4	20.3
32.5°	268.4	188.1	69.2	18.6	14.9
35°	256.4	166.9	48.5	14.5	11.2
37.5°	244.0	147.0	29.8	10.8	8.3
40°	231.1	126.8	18.2	7.9	5.8
42.5°	218.7	107.7	14.5	5.4	3.7
45°	205.5	88.2	11.2	3.3	2.1
47.5°	191.8	70.4	8.3	2.1	1.2
50°	178.5	54.7	5.8	1.2	0.8
52.5°	165.3	40.2	3.7	0.8	0.4
55°	152.0	26.9	2.5	0.8	0.4
57.5°	138.8	19.1	1.7	0.4	0.4
60°	125.5	14.9	0.8	0.4	0.0
62.5°	113.1	11.6	0.8	0.4	0.4
65°	99.8	7.9	0.4	0.4	0.0
67.5°	85.7	5.0	0.4	0.4	0.0
70°	72.5	2.9	0.4	0.4	0.0
72.5°	59.6	1.7	0.4	0.4	0.0
75°	47.2	0.8	0.4	0.4	0.0
77.5°	35.2	0.4	0.0	0.4	0.0
80°	24.0	0.0	0.0	0.4	0.0
82.5°	14.1	0.0	0.0	0.4	0.0
85°	5.0	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	12.89	14.15	13.26	14.46	14.78	0.00	0.00	0.00	0.00	0.00
	3H	16.63	17.75	17.01	18.08	18.44	0.00	0.00	0.00	0.00	0.00
	4H	17.94	18.98	18.34	19.33	19.71	0.00	0.00	0.00	0.00	0.00
	6H	18.79	19.75	19.21	20.12	20.51	0.00	0.00	0.00	0.00	0.00
	8H	19.01	19.91	19.44	20.30	20.71	0.00	0.00	0.00	0.00	0.00
	12H	19.07	19.93	19.50	20.32	20.75	0.00	0.00	0.00	0.00	0.00
4H	2H	12.65	13.69	13.05	14.04	14.42	0.00	0.00	0.00	0.00	0.00
	3H	16.38	17.24	16.80	17.64	18.04	0.00	0.00	0.00	0.00	0.00
	4H	17.68	18.44	18.11	18.86	19.30	0.00	0.00	0.00	0.00	0.00
	6H	18.59	19.25	19.06	19.70	20.17	0.00	0.00	0.00	0.00	0.00
	8H	18.85	19.47	19.32	19.91	20.38	0.00	0.00	0.00	0.00	0.00
	12H	18.96	19.49	19.44	19.98	20.45	0.00	0.00	0.00	0.00	0.00
8H	4H	17.53	18.14	18.00	18.59	19.06	0.00	0.00	0.00	0.00	0.00
	6H	18.43	18.93	18.94	19.43	19.91	0.00	0.00	0.00	0.00	0.00
	8H	18.69	19.13	19.21	19.65	20.14	0.00	0.00	0.00	0.00	0.00
	12H	18.81	19.20	19.32	19.69	20.27	0.00	0.00	0.00	0.00	0.00
12H	4H	17.48	18.02	17.97	18.51	18.98	0.00	0.00	0.00	0.00	0.00
	6H	18.37	18.81	18.89	19.33	19.82	0.00	0.00	0.00	0.00	0.00
	8H	18.65	19.03	19.16	19.53	20.10	0.00	0.00	0.00	0.00	0.00