

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: P1055290

Luminaire Tested: S122R3DR-H1005D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055290
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-H1005D927-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

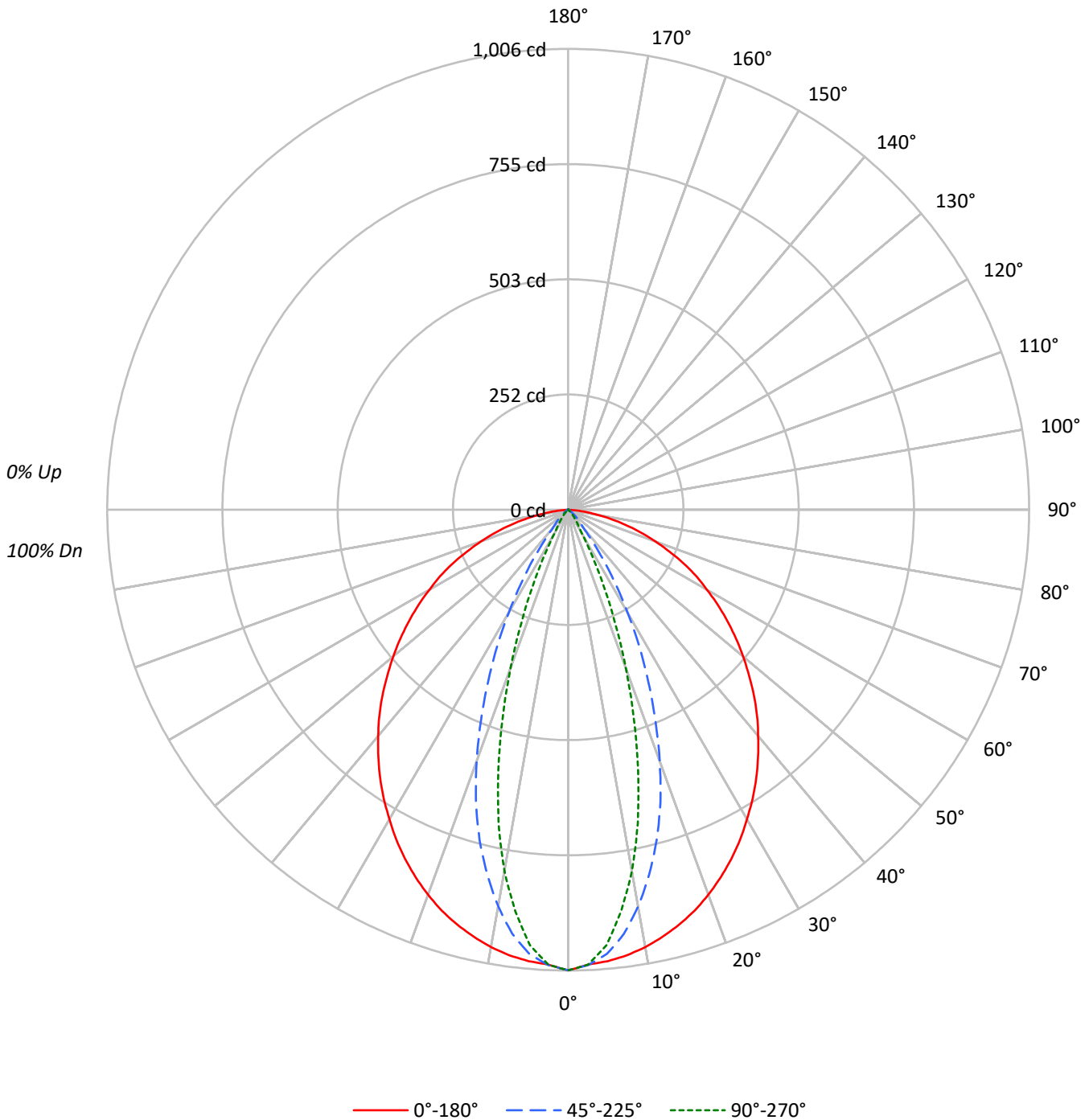
Lumens per Lamp: N/A
Luminaire Lumens: 914.8 lumens
Efficiency: N/A
Efficacy: 25.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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					100			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19050	19050	19050
5°	18815	18507	18155
10°	18653	16920	15408
15°	18384	14644	11539
20°	18035	11766	7387
25°	17589	8625	3792
30°	17066	5638	1238
35°	16546	3127	722
40°	15950	1259	401
45°	15358	836	155
50°	14681	477	68
55°	14008	228	40
60°	13270	87	0
65°	12485	54	0
70°	11201	66	0
75°	9648	88	0
80°	7310	0	0
85°	3022	261	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15358 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	9.9
10°-20°	209.4	22.9
20°-30°	212.6	23.2
30°-40°	159.5	17.4
40°-50°	111.7	12.2
50°-60°	68.4	7.5
60°-70°	40.8	4.5
70°-80°	18.8	2.1
80°-90°	3.4	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°	512.2	56.0
0°-40°	671.8	73.4
0°-60°	851.9	93.1
0°-90°	914.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	914.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	989	998	973	955	955	94
15°	937	886	747	632	588	264
25°	841	693	413	236	181	387
35°	715	466	135	40	31	447
45°	573	246	31	9	6	442
55°	424	75	7	2	1	379
65°	278	22	1	1	0	274
75°	132	2	1	1	0	140
85°	14	0	1	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1005.5	1005.5	1005.5	1005.5	1005.5
2.5°	993.9	1008.9	995.1	992.8	993.9
5°	989.3	998.5	973.1	954.6	954.6
7.5°	981.2	981.2	933.8	895.7	884.1
10°	969.6	956.9	879.5	818.2	800.9
12.5°	954.6	924.6	815.9	729.3	701.5
15°	937.3	886.4	746.6	632.2	588.3
17.5°	917.6	843.7	669.2	527.0	476.2
20°	894.5	797.4	583.6	419.5	366.4
22.5°	869.1	746.6	497.0	323.6	267.0
25°	841.4	693.4	412.6	235.8	181.4
27.5°	812.5	637.9	335.2	161.8	110.9
30°	780.1	580.2	257.7	95.9	56.6
32.5°	748.9	524.7	193.0	52.0	41.6
35°	715.4	465.7	135.2	40.4	31.2
37.5°	680.7	410.3	83.2	30.0	23.1
40°	644.9	353.6	50.9	22.0	16.2
42.5°	610.2	300.5	40.4	15.0	10.4
45°	573.2	246.2	31.2	9.2	5.8
47.5°	535.1	196.5	23.1	5.8	3.5
50°	498.1	152.6	16.2	3.5	2.3
52.5°	461.1	112.1	10.4	2.3	1.2
55°	424.1	75.1	6.9	2.3	1.2
57.5°	387.2	53.2	4.6	1.2	1.2
60°	350.2	41.6	2.3	1.2	0.0
62.5°	315.5	32.4	2.3	1.2	1.2
65°	278.5	22.0	1.2	1.2	0.0
67.5°	239.2	13.9	1.2	1.2	0.0
70°	202.2	8.1	1.2	1.2	0.0
72.5°	166.4	4.6	1.2	1.2	0.0
75°	131.8	2.3	1.2	1.2	0.0
77.5°	98.2	1.2	0.0	1.2	0.0
80°	67.0	0.0	0.0	1.2	0.0
82.5°	39.3	0.0	0.0	1.2	0.0
85°	13.9	0.0	1.2	1.2	0.0
87.5°	0.0	0.0	1.2	1.2	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	16.45	17.71	16.82	18.02	18.34	0.00	0.00	0.00	0.00	0.00
	3H	20.19	21.31	20.57	21.64	22.01	0.00	0.00	0.00	0.00	0.00
	4H	21.50	22.54	21.91	22.89	23.28	0.00	0.00	0.00	0.00	0.00
	6H	22.36	23.31	22.77	23.68	24.08	0.00	0.00	0.00	0.00	0.00
	8H	22.57	23.47	23.00	23.87	24.27	0.00	0.00	0.00	0.00	0.00
	12H	22.63	23.50	23.07	23.88	24.31	0.00	0.00	0.00	0.00	0.00
4H	2H	16.21	17.25	16.61	17.60	17.98	0.00	0.00	0.00	0.00	0.00
	3H	19.95	20.80	20.36	21.20	21.61	0.00	0.00	0.00	0.00	0.00
	4H	21.24	22.00	21.68	22.42	22.87	0.00	0.00	0.00	0.00	0.00
	6H	22.16	22.82	22.62	23.26	23.73	0.00	0.00	0.00	0.00	0.00
	8H	22.42	23.03	22.89	23.48	23.95	0.00	0.00	0.00	0.00	0.00
	12H	22.52	23.06	23.01	23.54	24.02	0.00	0.00	0.00	0.00	0.00
8H	4H	21.10	21.71	21.57	22.16	22.63	0.00	0.00	0.00	0.00	0.00
	6H	22.00	22.49	22.50	22.99	23.47	0.00	0.00	0.00	0.00	0.00
	8H	22.25	22.70	22.78	23.22	23.71	0.00	0.00	0.00	0.00	0.00
	12H	22.37	22.76	22.89	23.26	23.83	0.00	0.00	0.00	0.00	0.00
12H	4H	21.05	21.59	21.54	22.07	22.55	0.00	0.00	0.00	0.00	0.00
	6H	21.93	22.38	22.46	22.90	23.39	0.00	0.00	0.00	0.00	0.00
	8H	22.21	22.60	22.73	23.10	23.67	0.00	0.00	0.00	0.00	0.00