

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: P1055187

Luminaire Tested: S122R3DR-S290D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055187
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-S290D930-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

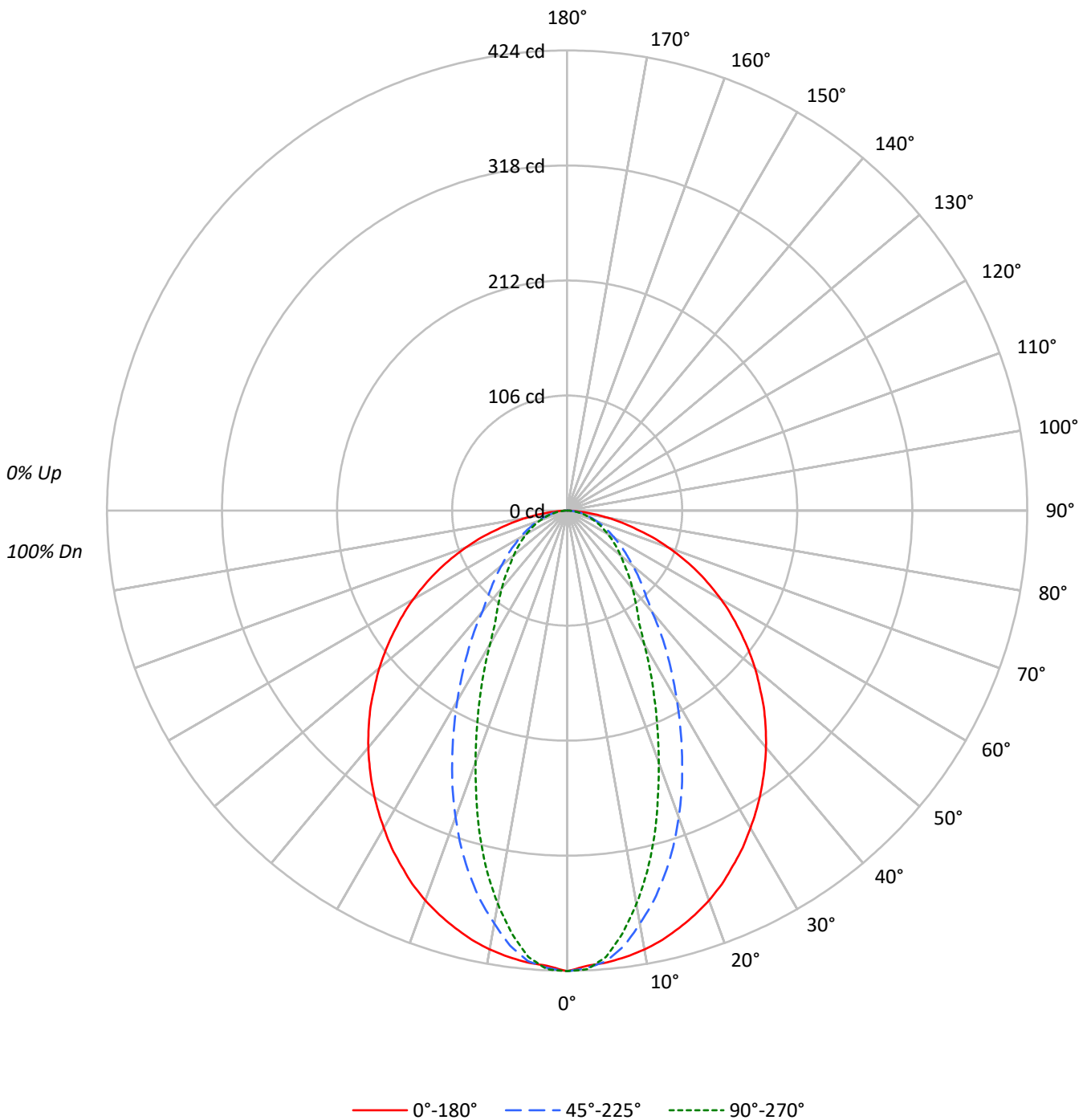
Lumens per Lamp: N/A
Luminaire Lumens: 642.0 lumens
Efficiency: N/A
Efficacy: 51.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	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°	8041	8041	8041
5°	7950	7923	7849
10°	7899	7434	7080
15°	7810	6814	6090
20°	7706	6061	4972
25°	7553	5237	3970
30°	7390	4426	3098
35°	7223	3701	2602
40°	7049	3002	2317
45°	6864	2623	2074
50°	6661	2323	1892
55°	6434	2097	1757
60°	6210	1910	1641
65°	5918	1748	1542
70°	5484	1634	1457
75°	4861	1479	1376
80°	4146	1397	1277
85°	2848	1239	1152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6864 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.9	6.1
10°-20°	98.2	15.3
20°-30°	121.0	18.8
30°-40°	116.1	18.1
40°-50°	100.1	15.6
50°-60°	77.7	12.1
60°-70°	53.2	8.3
70°-80°	28.9	4.5
80°-90°	7.9	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°	258.1	40.2
0°-40°	374.2	58.3
0°-60°	552.0	86.0
0°-90°	642.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	642.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	424	424	424	424	424	
5°	418	424	417	411	413	40
15°	398	386	347	319	310	112
25°	361	323	250	204	190	167
35°	312	248	160	119	112	195
45°	256	172	98	81	77	197
55°	195	104	64	55	53	174
65°	132	56	39	36	34	130
75°	66	26	20	19	19	71
85°	13	6	6	6	5	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	424.4	424.4	424.4	424.4	424.4
2.5°	419.8	426.9	421.9	421.9	423.0
5°	418.0	424.1	416.6	411.3	412.7
7.5°	414.8	419.1	404.2	392.8	392.5
10°	410.6	410.9	386.4	371.5	368.0
12.5°	405.3	399.6	368.4	346.0	340.7
15°	398.2	386.1	347.4	319.0	310.5
17.5°	390.7	372.3	325.1	289.6	277.9
20°	382.2	355.6	300.6	260.1	246.6
22.5°	372.6	339.6	276.1	231.7	217.5
25°	361.3	322.6	250.5	204.4	189.9
27.5°	350.3	305.2	226.0	180.3	165.4
30°	337.8	286.4	202.3	157.2	141.6
32.5°	325.4	267.2	180.3	135.2	123.5
35°	312.3	247.7	160.0	119.2	112.5
37.5°	298.8	228.5	140.9	108.6	102.6
40°	285.0	209.4	121.4	98.3	93.7
42.5°	270.8	190.6	107.9	89.8	85.5
45°	256.2	172.5	97.9	80.9	77.4
47.5°	240.6	154.4	88.4	73.5	70.3
50°	226.0	137.0	78.8	66.7	64.2
52.5°	210.4	119.9	71.0	60.7	58.6
55°	194.8	103.6	63.5	55.0	53.2
57.5°	179.6	88.0	56.4	49.7	48.3
60°	163.9	75.6	50.4	44.7	43.3
62.5°	148.0	65.7	44.7	40.1	38.7
65°	132.0	56.4	39.0	35.5	34.4
67.5°	115.3	47.6	34.1	31.2	30.5
70°	99.0	39.7	29.5	27.0	26.3
72.5°	83.0	32.3	24.8	23.1	22.4
75°	66.4	25.9	20.2	19.2	18.8
77.5°	51.8	20.2	16.3	15.6	15.3
80°	38.0	14.9	12.8	12.1	11.7
82.5°	25.2	10.3	9.2	8.9	8.5
85°	13.1	6.4	5.7	5.7	5.3
87.5°	4.3	2.8	2.8	2.8	2.5
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	16.85	18.32	17.22	18.63	18.95	11.66	13.13	12.02	13.44	13.76
	3H	19.18	20.50	19.56	20.83	21.19	13.31	14.62	13.68	14.95	15.31
	4H	20.08	21.31	20.48	21.66	22.04	13.94	15.18	14.34	15.53	15.91
	6H	20.74	21.88	21.15	22.25	22.64	14.44	15.58	14.85	15.94	16.34
	8H	20.95	22.03	21.37	22.42	22.82	14.61	15.69	15.03	16.08	16.48
	12H	21.06	22.10	21.49	22.48	22.91	14.72	15.76	15.15	16.14	16.57
4H	2H	16.87	18.10	17.27	18.45	18.83	12.37	13.61	12.77	13.96	14.34
	3H	19.28	20.30	19.69	20.70	21.11	14.22	15.25	14.63	15.65	16.05
	4H	20.21	21.13	20.64	21.55	21.99	14.97	15.89	15.40	16.31	16.75
	6H	20.99	21.79	21.45	22.23	22.69	15.59	16.39	16.04	16.83	17.29
	8H	21.26	22.01	21.72	22.45	22.92	15.80	16.55	16.27	17.00	17.46
	12H	21.43	22.10	21.92	22.58	23.05	15.96	16.63	16.45	17.11	17.58
8H	4H	20.20	20.95	20.67	21.40	21.86	15.35	16.10	15.81	16.54	17.01
	6H	21.01	21.63	21.51	22.12	22.60	16.09	16.71	16.59	17.20	17.68
	8H	21.31	21.87	21.83	22.38	22.87	16.38	16.94	16.90	17.45	17.94
	12H	21.54	22.03	22.05	22.52	23.09	16.63	17.12	17.14	17.61	18.17
12H	4H	20.18	20.85	20.67	21.33	21.80	15.41	16.07	15.89	16.55	17.02
	6H	20.99	21.54	21.50	22.05	22.54	16.17	16.73	16.69	17.24	17.73
	8H	21.32	21.81	21.83	22.30	22.87	16.53	17.02	17.04	17.51	18.08