

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: P1055193

Luminaire Tested: S122R3DR-S290D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055193
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-S290D940-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

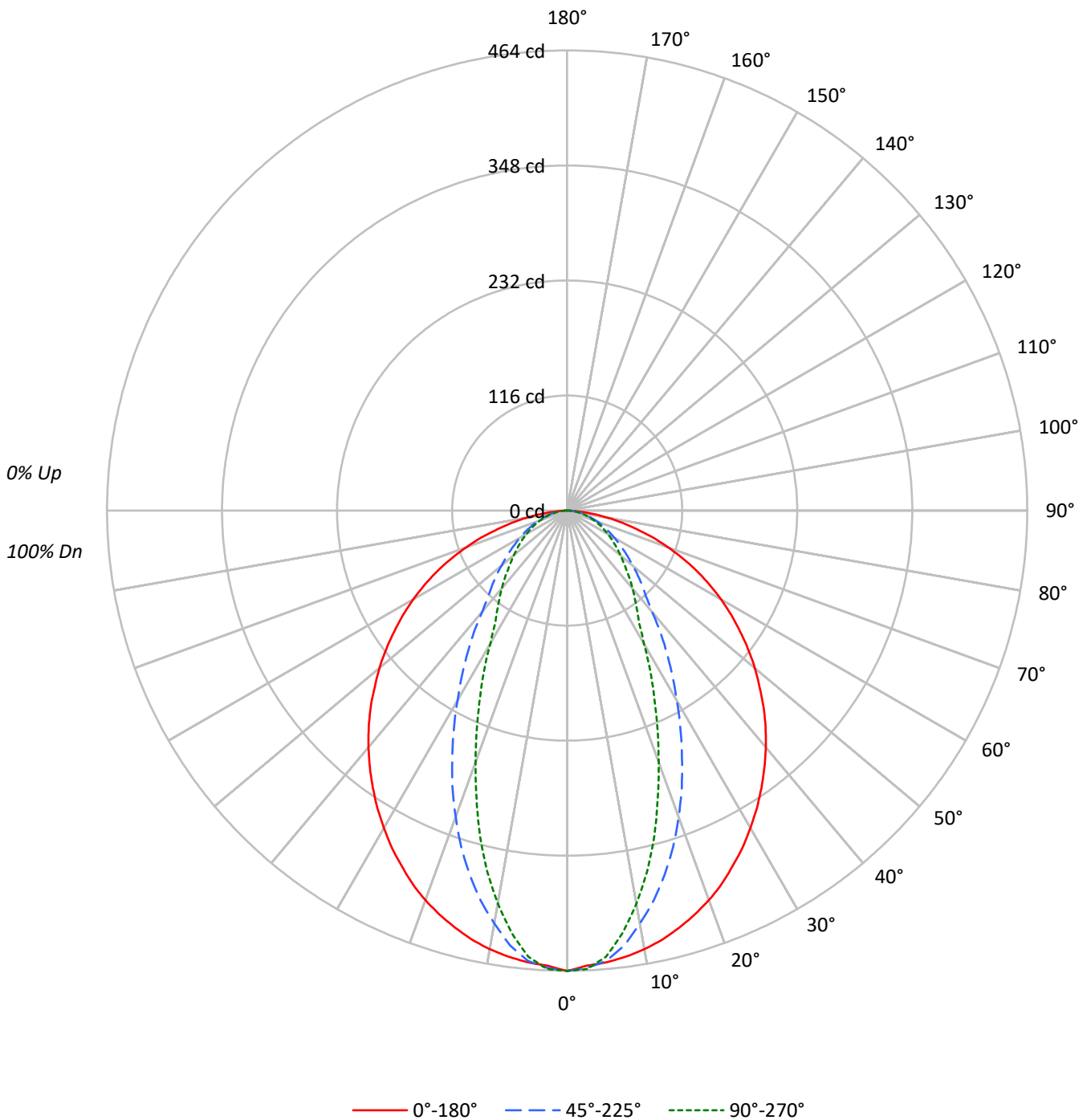
Lumens per Lamp: N/A
Luminaire Lumens: 702.1 lumens
Efficiency: N/A
Efficacy: 55.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	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°	8795	8795	8795
5°	8695	8667	8585
10°	8640	8132	7743
15°	8542	7453	6661
20°	8428	6627	5438
25°	8259	5728	4340
30°	8083	4839	3389
35°	7898	4048	2845
40°	7709	3282	2535
45°	7508	2870	2267
50°	7286	2541	2072
55°	7039	2296	1922
60°	6794	2088	1796
65°	6473	1914	1686
70°	5999	1784	1590
75°	5314	1618	1508
80°	4528	1527	1397
85°	3130	1348	1261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7508 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	6.1
10°-20°	107.4	15.3
20°-30°	132.3	18.8
30°-40°	127.0	18.1
40°-50°	109.5	15.6
50°-60°	85.0	12.1
60°-70°	58.2	8.3
70°-80°	31.6	4.5
80°-90°	8.7	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°	282.3	40.2
0°-40°	409.2	58.3
0°-60°	603.7	86.0
0°-90°	702.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	702.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	457	464	456	450	451	43
15°	436	422	380	349	340	123
25°	395	353	274	224	208	182
35°	342	271	175	130	123	214
45°	280	189	107	88	85	216
55°	213	113	70	60	58	191
65°	144	62	43	39	38	143
75°	73	28	22	21	21	78
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°	464.2	464.2	464.2	464.2	464.2
2.5°	459.2	466.9	461.5	461.5	462.6
5°	457.2	463.8	455.7	449.8	451.4
7.5°	453.7	458.4	442.1	429.7	429.3
10°	449.1	449.4	422.7	406.4	402.5
12.5°	443.2	437.0	402.9	378.4	372.6
15°	435.5	422.3	380.0	348.9	339.6
17.5°	427.3	407.1	355.5	316.7	303.9
20°	418.0	388.9	328.7	284.5	269.7
22.5°	407.5	371.4	302.0	253.4	237.9
25°	395.1	352.8	274.0	223.6	207.6
27.5°	383.1	333.8	247.2	197.2	180.9
30°	369.5	313.2	221.2	171.9	154.9
32.5°	355.9	292.3	197.2	147.9	135.1
35°	341.5	270.9	175.0	130.4	123.0
37.5°	326.8	250.0	154.1	118.8	112.2
40°	311.7	229.0	132.7	107.5	102.5
42.5°	296.1	208.4	118.0	98.2	93.5
45°	280.2	188.6	107.1	88.5	84.6
47.5°	263.1	168.8	96.6	80.3	76.8
50°	247.2	149.8	86.2	73.0	70.3
52.5°	230.2	131.2	77.6	66.4	64.0
55°	213.1	113.3	69.5	60.2	58.2
57.5°	196.4	96.3	61.7	54.3	52.8
60°	179.3	82.7	55.1	48.9	47.4
62.5°	161.8	71.8	48.9	43.9	42.3
65°	144.4	61.7	42.7	38.8	37.6
67.5°	126.1	52.0	37.3	34.2	33.4
70°	108.3	43.5	32.2	29.5	28.7
72.5°	90.8	35.3	27.2	25.2	24.5
75°	72.6	28.3	22.1	21.0	20.6
77.5°	56.7	22.1	17.9	17.1	16.7
80°	41.5	16.3	14.0	13.2	12.8
82.5°	27.6	11.3	10.1	9.7	9.3
85°	14.4	7.0	6.2	6.2	5.8
87.5°	4.7	3.1	3.1	3.1	2.7
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	17.16	18.63	17.53	18.95	19.26	11.96	13.43	12.33	13.75	14.06
	3H	19.49	20.81	19.87	21.14	21.50	13.61	14.93	13.99	15.26	15.62
	4H	20.39	21.62	20.79	21.97	22.35	14.25	15.49	14.65	15.84	16.22
	6H	21.05	22.19	21.46	22.56	22.95	14.75	15.89	15.16	16.25	16.65
	8H	21.26	22.34	21.69	22.73	23.14	14.92	16.00	15.34	16.39	16.79
	12H	21.38	22.41	21.81	22.80	23.22	15.03	16.07	15.46	16.45	16.88
4H	2H	17.18	18.42	17.58	18.76	19.14	12.68	13.92	13.08	14.26	14.64
	3H	19.59	20.62	20.00	21.02	21.42	14.53	15.56	14.94	15.96	16.36
	4H	20.52	21.44	20.95	21.86	22.30	15.28	16.20	15.71	16.62	17.06
	6H	21.30	22.10	21.76	22.54	23.00	15.90	16.70	16.35	17.14	17.60
	8H	21.57	22.32	22.03	22.76	23.23	16.11	16.86	16.58	17.31	17.77
	12H	21.75	22.42	22.23	22.90	23.37	16.27	16.94	16.75	17.42	17.89
8H	4H	20.51	21.26	20.98	21.71	22.18	15.66	16.41	16.12	16.85	17.32
	6H	21.32	21.94	21.82	22.43	22.91	16.40	17.02	16.90	17.51	17.99
	8H	21.62	22.18	22.14	22.69	23.18	16.69	17.25	17.21	17.76	18.25
	12H	21.86	22.34	22.37	22.84	23.40	16.94	17.42	17.45	17.92	18.48
12H	4H	20.49	21.16	20.98	21.64	22.11	15.72	16.39	16.20	16.86	17.34
	6H	21.30	21.85	21.81	22.36	22.85	16.48	17.04	17.00	17.55	18.04
	8H	21.63	22.12	22.14	22.61	23.18	16.84	17.33	17.35	17.82	18.39