

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: P1055192

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
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-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

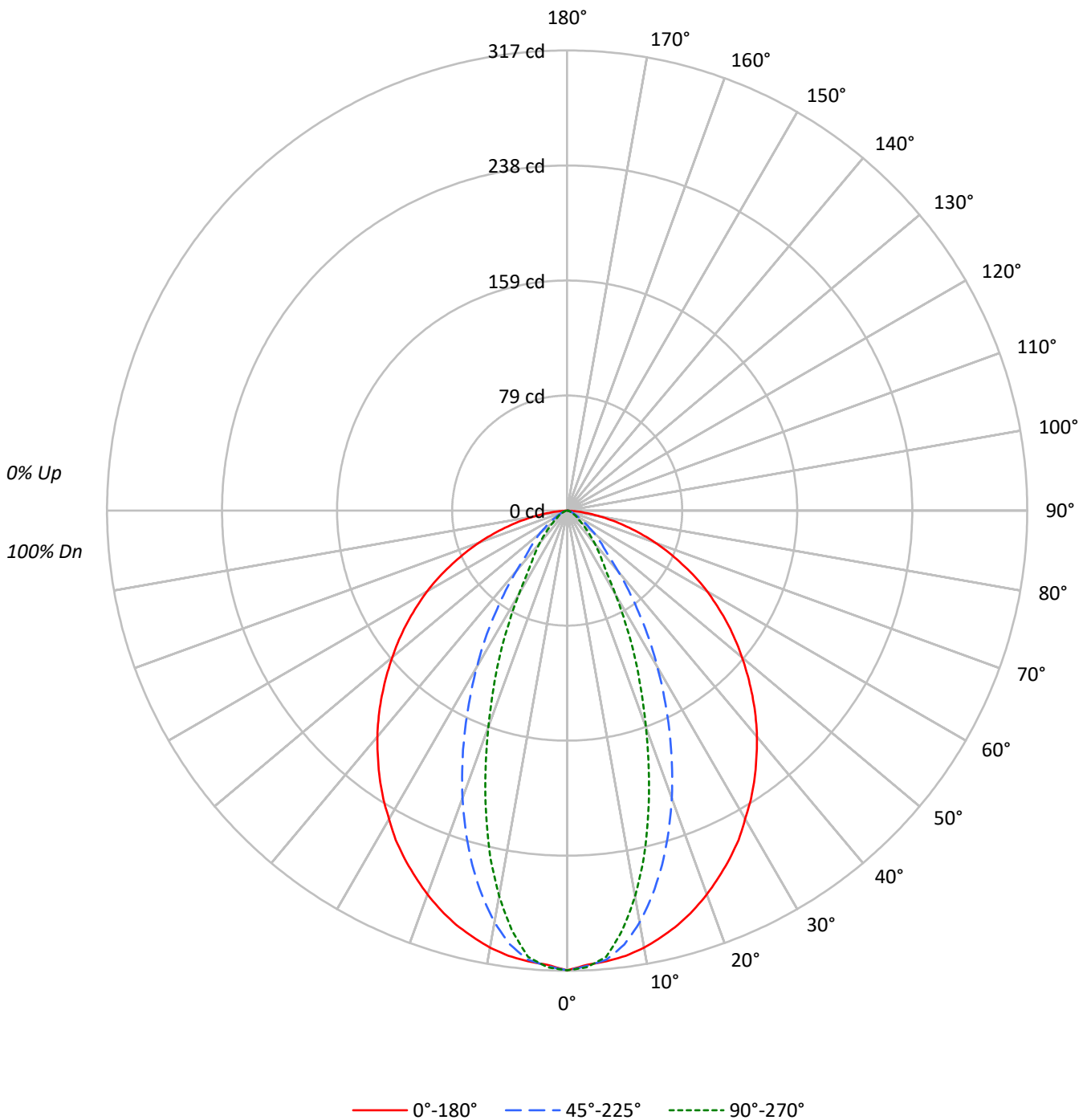
Lumens per Lamp: N/A
Luminaire Lumens: 363.0 lumens
Efficiency: N/A
Efficacy: 28.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6000	6000	6000
5°	5928	5905	5869
10°	5883	5541	5189
15°	5794	4957	4233
20°	5674	4250	3194
25°	5533	3481	2281
30°	5366	2717	1453
35°	5206	1994	969
40°	5030	1343	730
45°	4836	946	520
50°	4633	722	365
55°	4436	499	271
60°	4221	337	220
65°	3914	242	175
70°	3567	194	150
75°	3096	168	117
80°	2455	131	131
85°	1348	174	87

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	8.0
10°-20°	71.1	19.6
20°-30°	81.2	22.4
30°-40°	68.9	19.0
40°-50°	51.4	14.2
50°-60°	33.2	9.1
60°-70°	18.5	5.1
70°-80°	8.1	2.2
80°-90°	1.7	0.5
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°	181.2	49.9
0°-40°	250.1	68.9
0°-60°	334.6	92.2
0°-90°	363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	363.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	317	317	317	317	317	
5°	312	316	310	307	309	30
15°	295	288	253	226	216	83
25°	265	234	166	122	109	122
35°	225	170	86	47	42	141
45°	180	107	35	23	19	139
55°	134	51	15	9	8	120
65°	87	19	5	4	4	87
75°	42	4	2	2	2	45
85°	6	0	1	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	316.7	316.7	316.7	316.7	316.7
2.5°	313.2	317.9	314.0	314.0	314.8
5°	311.7	315.5	310.5	307.4	308.6
7.5°	309.3	312.1	301.6	292.3	291.5
10°	305.8	307.0	288.0	273.6	269.7
12.5°	300.8	298.1	271.3	251.1	244.5
15°	295.4	288.0	252.7	225.9	215.8
17.5°	288.8	275.6	232.1	199.5	187.1
20°	281.4	262.8	210.8	171.9	158.4
22.5°	273.2	248.4	188.6	145.9	132.4
25°	264.7	233.7	166.5	121.9	109.1
27.5°	255.8	218.1	144.8	100.1	86.2
30°	245.3	202.2	124.2	79.2	66.4
32.5°	235.6	185.5	105.2	61.3	50.5
35°	225.1	169.6	86.2	47.0	41.9
37.5°	214.2	153.7	69.5	39.6	35.3
40°	203.4	137.8	54.3	33.4	29.5
42.5°	192.1	122.3	41.9	27.9	24.1
45°	180.5	107.1	35.3	22.9	19.4
47.5°	168.8	92.0	29.5	18.2	15.5
50°	157.2	77.6	24.5	14.4	12.4
52.5°	145.9	64.0	19.4	11.6	10.1
55°	134.3	50.8	15.1	9.3	8.2
57.5°	122.6	39.6	11.6	7.8	7.0
60°	111.4	29.9	8.9	6.2	5.8
62.5°	99.7	24.1	7.0	5.0	4.7
65°	87.3	18.6	5.4	4.3	3.9
67.5°	76.1	13.6	4.3	3.5	3.1
70°	64.4	9.3	3.5	3.1	2.7
72.5°	53.2	5.8	2.7	2.3	2.3
75°	42.3	3.9	2.3	1.9	1.6
77.5°	32.2	2.3	1.6	1.6	1.2
80°	22.5	1.6	1.2	1.2	1.2
82.5°	14.0	1.2	0.8	0.8	0.8
85°	6.2	0.4	0.8	0.4	0.4
87.5°	1.2	0.4	0.4	0.4	0.4
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	14.48	15.80	14.84	16.11	16.42	0.81	2.13	1.18	2.45	2.76
	3H	16.95	18.12	17.33	18.45	18.81	1.65	2.83	2.03	3.16	3.52
	4H	17.90	18.99	18.31	19.35	19.73	1.93	3.02	2.33	3.37	3.75
	6H	18.59	19.59	19.00	19.96	20.36	2.13	3.14	2.55	3.51	3.90
	8H	18.79	19.74	19.22	20.13	20.53	2.22	3.17	2.65	3.56	3.96
	12H	18.87	19.78	19.30	20.16	20.59	2.24	3.15	2.68	3.53	3.97
4H	2H	14.26	15.35	14.66	15.70	16.09	1.37	2.47	1.78	2.82	3.20
	3H	16.75	17.64	17.16	18.04	18.45	2.40	3.29	2.81	3.70	4.10
	4H	17.69	18.49	18.12	18.91	19.35	2.76	3.56	3.19	3.98	4.42
	6H	18.44	19.13	18.91	19.58	20.05	3.07	3.76	3.54	4.21	4.68
	8H	18.69	19.33	19.16	19.78	20.25	3.18	3.82	3.65	4.27	4.74
	12H	18.82	19.39	19.30	19.87	20.34	3.23	3.80	3.72	4.28	4.76
8H	4H	17.56	18.20	18.03	18.65	19.12	3.13	3.78	3.60	4.22	4.69
	6H	18.30	18.82	18.80	19.32	19.80	3.52	4.04	4.02	4.54	5.02
	8H	18.54	19.01	19.06	19.53	20.02	3.67	4.14	4.19	4.65	5.15
	12H	18.69	19.11	19.21	19.60	20.17	3.76	4.17	4.27	4.67	5.24
12H	4H	17.51	18.08	18.00	18.56	19.04	3.26	3.82	3.74	4.31	4.78
	6H	18.23	18.71	18.76	19.22	19.71	3.64	4.11	4.16	4.63	5.12
	8H	18.50	18.91	19.02	19.41	19.98	3.83	4.24	4.35	4.74	5.31