

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: P1055620

Luminaire Tested: S123R3DR-S340D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055620
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S340D935-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

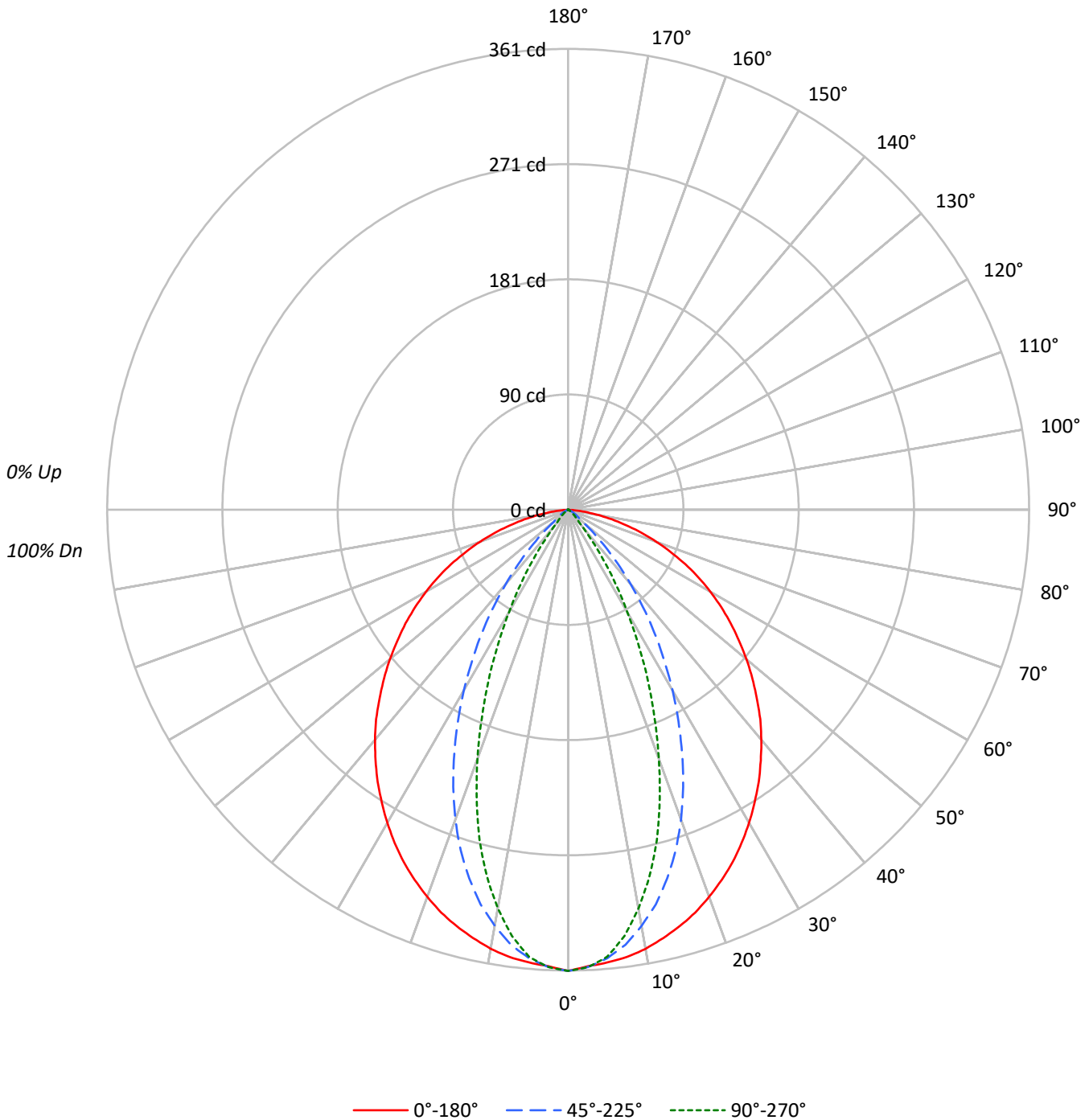
Lumens per Lamp: N/A
Luminaire Lumens: 422.8 lumens
Efficiency: N/A
Efficacy: 33.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4356	4356	4356
5°	4308	4267	4254
10°	4276	4051	3881
15°	4215	3733	3345
20°	4140	3313	2664
25°	4053	2807	1965
30°	3944	2275	1289
35°	3828	1732	706
40°	3703	1198	242
45°	3558	696	140
50°	3416	274	84
55°	3269	172	40
60°	3098	109	17
65°	2887	54	11
70°	2591	25	14
75°	2199	19	19
80°	1639	28	0
85°	622	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3558 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	7.8
10°-20°	84.1	19.9
20°-30°	100.3	23.7
30°-40°	85.0	20.1
40°-50°	57.8	13.7
50°-60°	35.8	8.5
60°-70°	18.1	4.3
70°-80°	7.4	1.8
80°-90°	1.1	0.3
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°	217.4	51.4
0°-40°	302.5	71.5
0°-60°	396.1	93.7
0°-90°	422.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	422.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	361	361	361	361	361	
5°	356	359	353	350	352	34
15°	338	329	299	275	268	95
25°	305	276	211	163	148	140
35°	260	209	118	63	48	163
45°	209	137	41	10	8	161
55°	156	69	8	3	2	139
65°	101	17	2	0	0	100
75°	47	3	0	0	0	50
85°	4	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°	361.3	361.3	361.3	361.3	361.3
2.5°	357.9	362.8	358.6	358.3	358.6
5°	356.0	359.4	352.6	350.0	351.5
7.5°	353.4	354.9	343.7	336.9	336.9
10°	349.3	348.1	330.9	319.7	317.0
12.5°	343.7	339.2	316.7	299.1	294.2
15°	337.7	329.0	299.1	275.4	268.0
17.5°	330.9	317.8	279.9	249.2	238.3
20°	322.7	305.1	258.2	220.7	207.6
22.5°	314.0	291.2	235.3	191.5	176.9
25°	304.7	276.2	211.0	163.0	147.7
27.5°	294.2	260.5	187.0	135.7	118.8
30°	283.3	244.0	163.4	109.4	92.6
32.5°	271.7	226.7	139.8	85.4	69.7
35°	260.1	208.7	117.7	63.3	48.0
37.5°	247.7	190.8	96.3	43.8	30.4
40°	235.3	173.1	76.1	27.7	15.4
42.5°	222.6	154.8	57.7	13.9	10.5
45°	208.7	136.8	40.8	10.1	8.2
47.5°	195.6	119.5	27.0	8.2	6.4
50°	182.1	102.3	14.6	6.0	4.5
52.5°	168.6	85.8	10.5	4.5	3.0
55°	155.5	69.0	8.2	3.0	1.9
57.5°	142.0	54.3	6.4	1.9	1.1
60°	128.5	40.1	4.5	1.1	0.7
62.5°	115.1	27.7	3.0	0.7	0.4
65°	101.2	16.9	1.9	0.4	0.4
67.5°	86.9	11.6	1.1	0.4	0.4
70°	73.5	8.2	0.7	0.4	0.4
72.5°	60.0	5.2	0.4	0.4	0.0
75°	47.2	3.0	0.4	0.4	0.4
77.5°	34.9	1.1	0.4	0.4	0.0
80°	23.6	0.4	0.4	0.4	0.0
82.5°	13.1	0.0	0.4	0.4	0.0
85°	4.5	0.0	0.0	0.4	0.0
87.5°	0.0	0.0	0.0	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	14.16	15.44	14.52	15.75	16.06	0.00	0.00	0.00	0.00	0.00
	3H	16.10	17.24	16.48	17.57	17.93	0.00	0.00	0.00	0.00	0.00
	4H	16.93	17.99	17.33	18.34	18.72	0.00	0.00	0.00	0.00	0.00
	6H	17.48	18.45	17.90	18.82	19.22	0.00	0.00	0.00	0.00	0.00
	8H	17.61	18.53	18.04	18.92	19.32	0.00	0.00	0.00	0.00	0.00
	12H	17.63	18.51	18.07	18.89	19.32	0.00	0.00	0.00	0.00	0.00
4H	2H	13.92	14.98	14.32	15.33	15.71	0.00	0.00	0.00	0.00	0.00
	3H	15.87	16.74	16.29	17.14	17.54	0.00	0.00	0.00	0.00	0.00
	4H	16.69	17.46	17.12	17.88	18.32	0.00	0.00	0.00	0.00	0.00
	6H	17.29	17.95	17.75	18.40	18.87	0.00	0.00	0.00	0.00	0.00
	8H	17.44	18.06	17.91	18.51	18.98	0.00	0.00	0.00	0.00	0.00
	12H	17.49	18.03	17.98	18.52	18.99	0.00	0.00	0.00	0.00	0.00
8H	4H	16.54	17.16	17.02	17.61	18.08	0.00	0.00	0.00	0.00	0.00
	6H	17.13	17.63	17.63	18.13	18.61	0.00	0.00	0.00	0.00	0.00
	8H	17.28	17.73	17.80	18.24	18.74	0.00	0.00	0.00	0.00	0.00
	12H	17.34	17.73	17.85	18.23	18.80	0.00	0.00	0.00	0.00	0.00
12H	4H	16.50	17.04	16.98	17.52	18.00	0.00	0.00	0.00	0.00	0.00
	6H	17.07	17.52	17.59	18.03	18.52	0.00	0.00	0.00	0.00	0.00
	8H	17.23	17.63	17.75	18.12	18.70	0.00	0.00	0.00	0.00	0.00