

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: P1055626

Luminaire Tested: S123R3DR-S340D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055626
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-S340D950-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

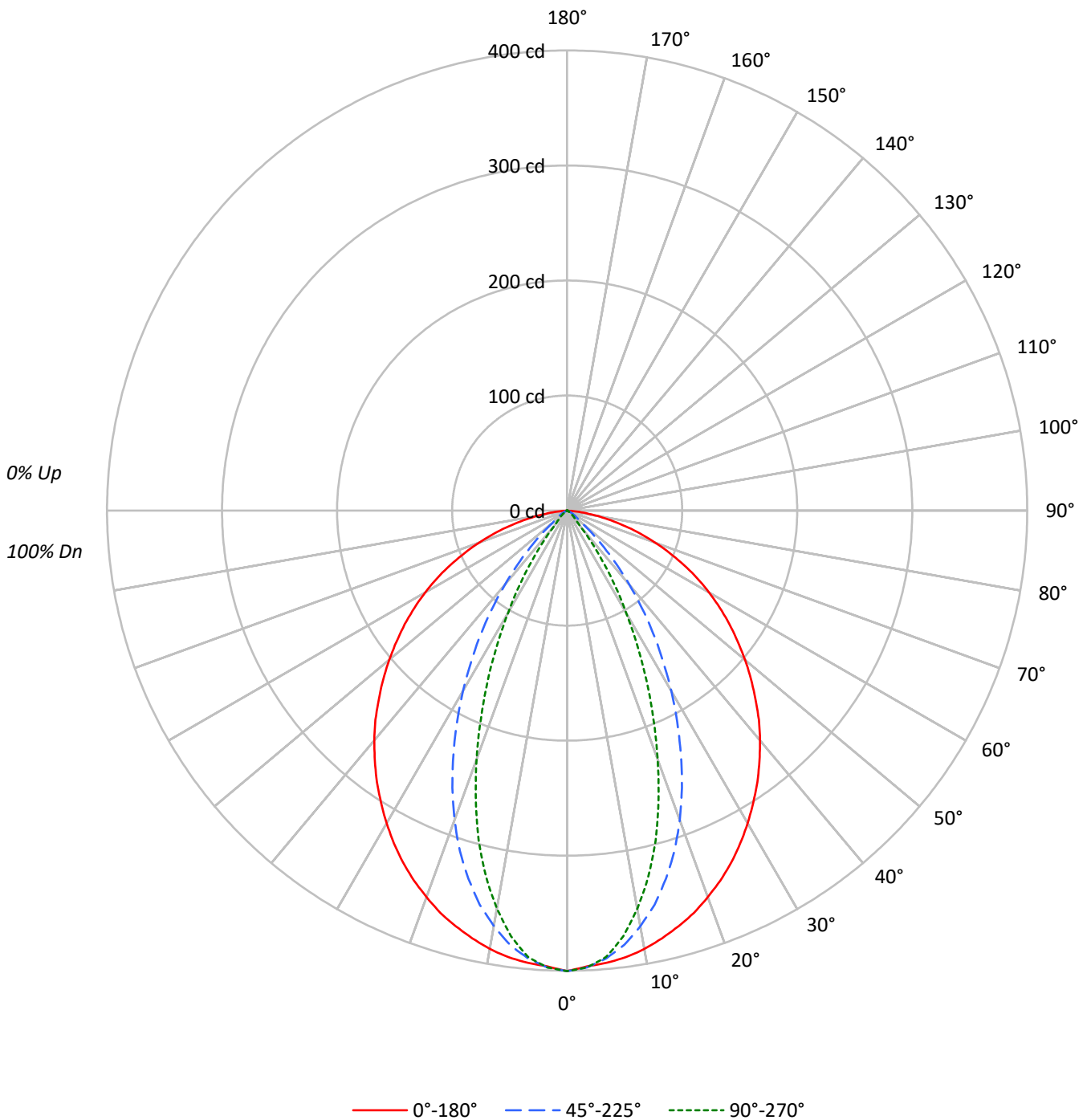
Lumens per Lamp: N/A
Luminaire Lumens: 468.5 lumens
Efficiency: N/A
Efficacy: 37.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4826	4826	4826
5°	4774	4728	4714
10°	4738	4489	4301
15°	4669	4136	3706
20°	4587	3671	2951
25°	4491	3110	2176
30°	4370	2520	1428
35°	4242	1919	783
40°	4105	1327	268
45°	3944	772	155
50°	3785	304	94
55°	3622	191	44
60°	3434	121	19
65°	3198	60	11
70°	2869	28	14
75°	2436	19	19
80°	1819	28	0
85°	692	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3944 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.7	7.8
10°-20°	93.1	19.9
20°-30°	111.1	23.7
30°-40°	94.2	20.1
40°-50°	64.1	13.7
50°-60°	39.7	8.5
60°-70°	20.1	4.3
70°-80°	8.2	1.7
80°-90°	1.3	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°	240.9	51.4
0°-40°	335.2	71.5
0°-60°	438.9	93.7
0°-90°	468.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	468.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	400	400	400	400	400	
5°	394	398	391	388	390	37
15°	374	365	331	305	297	105
25°	338	306	234	181	164	155
35°	288	231	130	70	53	180
45°	231	152	45	11	9	179
55°	172	76	9	3	2	154
65°	112	19	2	0	0	111
75°	52	3	0	0	0	56
85°	5	0	0	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	400.3	400.3	400.3	400.3	400.3
2.5°	396.6	401.9	397.4	397.0	397.4
5°	394.5	398.2	390.7	387.8	389.5
7.5°	391.6	393.2	380.8	373.3	373.3
10°	387.0	385.8	366.7	354.2	351.3
12.5°	380.8	375.8	350.9	331.4	326.0
15°	374.1	364.6	331.4	305.2	296.9
17.5°	366.7	352.1	310.2	276.1	264.1
20°	357.5	338.0	286.1	244.6	230.0
22.5°	348.0	322.6	260.8	212.2	196.0
25°	337.6	306.0	233.8	180.6	163.6
27.5°	326.0	288.6	207.2	150.3	131.6
30°	313.9	270.3	181.0	121.2	102.6
32.5°	301.0	251.2	154.9	94.7	77.2
35°	288.2	231.3	130.4	70.2	53.2
37.5°	274.5	211.4	106.7	48.6	33.6
40°	260.8	191.8	84.3	30.7	17.0
42.5°	246.7	171.5	63.9	15.4	11.6
45°	231.3	151.6	45.3	11.2	9.1
47.5°	216.8	132.5	29.9	9.1	7.1
50°	201.8	113.4	16.2	6.6	5.0
52.5°	186.9	95.1	11.6	5.0	3.3
55°	172.3	76.4	9.1	3.3	2.1
57.5°	157.4	60.2	7.1	2.1	1.2
60°	142.4	44.4	5.0	1.2	0.8
62.5°	127.5	30.7	3.3	0.8	0.4
65°	112.1	18.7	2.1	0.4	0.4
67.5°	96.3	12.9	1.2	0.4	0.4
70°	81.4	9.1	0.8	0.4	0.4
72.5°	66.4	5.8	0.4	0.4	0.0
75°	52.3	3.3	0.4	0.4	0.4
77.5°	38.6	1.2	0.4	0.4	0.0
80°	26.2	0.4	0.4	0.4	0.0
82.5°	14.5	0.0	0.4	0.4	0.0
85°	5.0	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	14.52	15.80	14.88	16.11	16.42	0.00	0.00	0.00	0.00	0.00
	3H	16.46	17.60	16.84	17.93	18.29	0.00	0.00	0.00	0.00	0.00
	4H	17.29	18.34	17.69	18.69	19.08	0.00	0.00	0.00	0.00	0.00
	6H	17.84	18.81	18.26	19.18	19.58	0.00	0.00	0.00	0.00	0.00
	8H	17.97	18.88	18.40	19.28	19.68	0.00	0.00	0.00	0.00	0.00
	12H	17.99	18.87	18.42	19.25	19.68	0.00	0.00	0.00	0.00	0.00
4H	2H	14.28	15.34	14.68	15.69	16.07	0.00	0.00	0.00	0.00	0.00
	3H	16.23	17.09	16.65	17.50	17.90	0.00	0.00	0.00	0.00	0.00
	4H	17.05	17.82	17.48	18.24	18.68	0.00	0.00	0.00	0.00	0.00
	6H	17.65	18.31	18.11	18.76	19.22	0.00	0.00	0.00	0.00	0.00
	8H	17.80	18.42	18.27	18.86	19.34	0.00	0.00	0.00	0.00	0.00
	12H	17.85	18.39	18.33	18.87	19.35	0.00	0.00	0.00	0.00	0.00
8H	4H	16.90	17.52	17.37	17.97	18.44	0.00	0.00	0.00	0.00	0.00
	6H	17.49	17.99	17.99	18.48	18.97	0.00	0.00	0.00	0.00	0.00
	8H	17.63	18.08	18.16	18.60	19.09	0.00	0.00	0.00	0.00	0.00
	12H	17.69	18.09	18.21	18.58	19.15	0.00	0.00	0.00	0.00	0.00
12H	4H	16.85	17.40	17.34	17.88	18.36	0.00	0.00	0.00	0.00	0.00
	6H	17.42	17.87	17.95	18.39	18.88	0.00	0.00	0.00	0.00	0.00
	8H	17.59	17.98	18.11	18.48	19.05	0.00	0.00	0.00	0.00	0.00