

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: P1055628

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055628
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
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-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

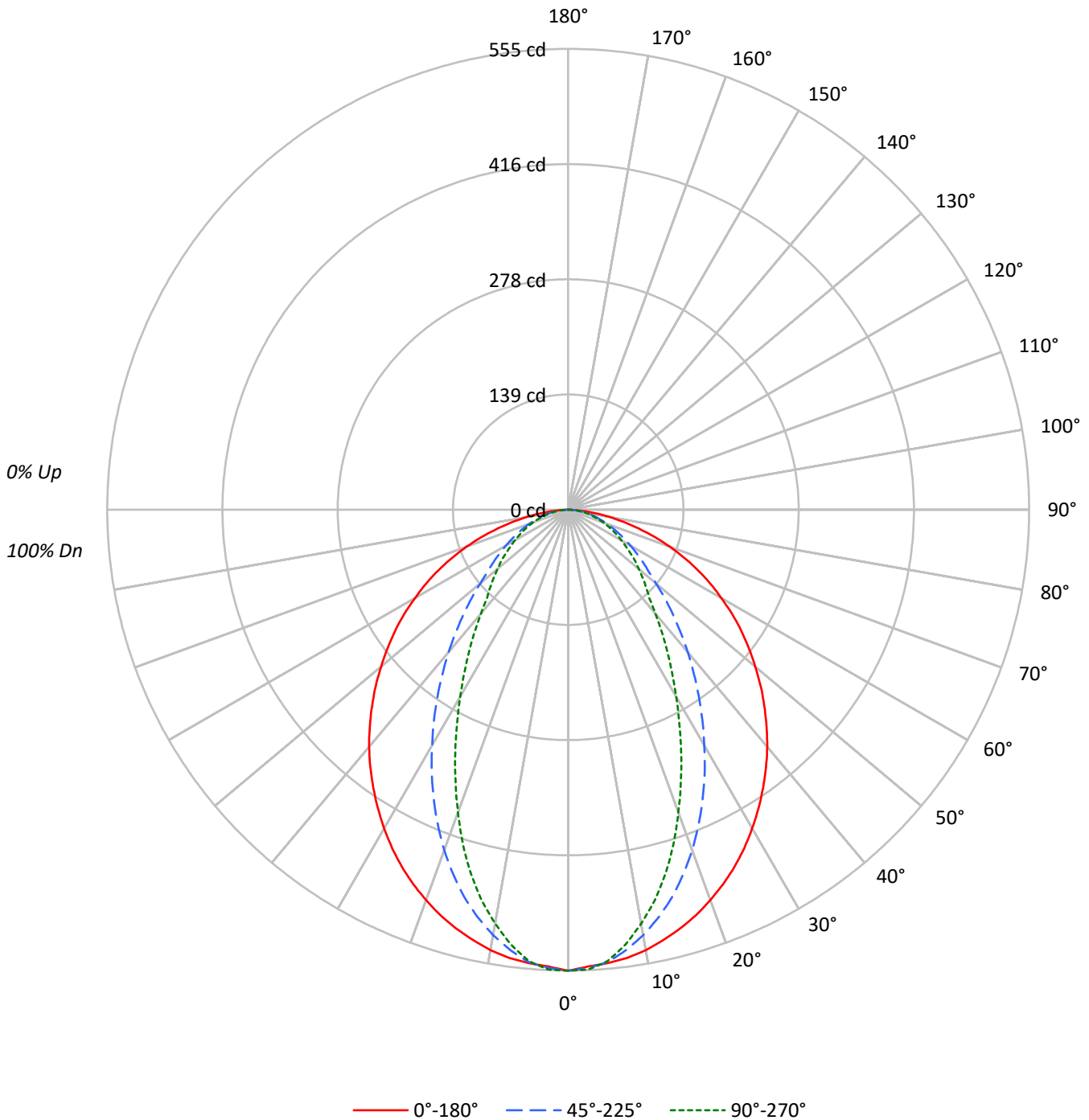
Lumens per Lamp: N/A
Luminaire Lumens: 973.7 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6694	6694	6694
5°	6633	6619	6603
10°	6594	6370	6197
15°	6515	6032	5659
20°	6420	5599	4976
25°	6308	5099	4281
30°	6169	4561	3618
35°	6020	4034	3055
40°	5869	3522	2569
45°	5693	3037	2266
50°	5514	2587	2080
55°	5350	2304	1921
60°	5126	2083	1792
65°	4915	1909	1683
70°	4583	1755	1579
75°	4099	1626	1491
80°	3520	1500	1382
85°	2476	1383	1328

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5693 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	5.3
10°-20°	136.2	14.0
20°-30°	179.4	18.4
30°-40°	182.0	18.7
40°-50°	158.2	16.3
50°-60°	124.0	12.7
60°-70°	84.2	8.7
70°-80°	45.6	4.7
80°-90°	12.6	1.3
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°	367.0	37.7
0°-40°	549.0	56.4
0°-60°	831.2	85.4
0°-90°	973.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	973.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	555	555	555	555	555	
5°	548	555	547	542	546	52
15°	522	514	483	460	453	147
25°	474	446	383	336	322	218
35°	409	360	274	222	208	256
45°	334	268	178	137	133	258
55°	254	177	110	93	91	227
65°	172	96	67	60	59	170
75°	88	44	35	32	32	94
85°	18	11	10	9	10	22
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	555.2	555.2	555.2	555.2	555.2
2.5°	550.6	557.7	552.3	552.7	554.3
5°	548.1	554.8	546.9	541.9	545.6
7.5°	544.4	549.4	534.8	526.9	528.2
10°	538.6	540.2	520.3	507.8	506.2
12.5°	530.7	527.8	502.9	484.6	481.7
15°	522.0	514.5	483.3	459.7	453.4
17.5°	512.0	499.5	460.5	431.4	421.9
20°	500.4	482.9	436.4	399.5	387.8
22.5°	487.9	465.5	410.3	366.7	354.6
25°	474.2	445.5	383.3	335.5	321.8
27.5°	459.3	425.6	355.9	304.8	289.4
30°	443.1	404.9	327.6	274.9	259.9
32.5°	426.4	382.8	300.6	247.1	232.5
35°	409.0	360.4	274.1	221.7	207.6
37.5°	391.2	337.6	248.3	197.7	184.4
40°	372.9	314.3	223.8	175.2	163.2
42.5°	353.4	291.1	200.1	154.1	144.9
45°	333.9	267.8	178.1	137.4	132.9
47.5°	314.3	244.2	157.4	125.8	121.7
50°	294.0	221.3	137.9	115.0	110.9
52.5°	274.1	198.9	121.7	104.6	101.7
55°	254.5	176.9	109.6	93.4	91.4
57.5°	234.2	155.3	97.6	84.7	82.2
60°	212.6	134.5	86.4	75.6	74.3
62.5°	193.1	115.0	76.4	67.7	66.4
65°	172.3	95.5	66.9	59.8	59.0
67.5°	151.1	79.3	58.1	52.3	51.9
70°	130.0	66.9	49.8	45.3	44.8
72.5°	109.2	55.2	41.9	39.0	38.2
75°	88.0	44.0	34.9	32.4	32.0
77.5°	68.9	34.0	27.8	26.2	25.7
80°	50.7	25.3	21.6	20.3	19.9
82.5°	33.2	17.4	15.4	14.5	14.5
85°	17.9	10.8	10.0	9.1	9.6
87.5°	6.2	4.6	4.6	4.2	4.6
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	18.66	17.53	18.97	19.28	12.31	13.80	12.68	14.12	14.43
	3H	19.05	20.39	19.43	20.72	21.08	13.94	15.28	14.32	15.61	15.97
	4H	19.81	21.06	20.21	21.41	21.79	14.58	15.83	14.98	16.18	16.56
	6H	20.37	21.53	20.78	21.90	22.29	15.06	16.23	15.48	16.59	16.98
	8H	20.54	21.65	20.97	22.04	22.44	15.23	16.34	15.66	16.73	17.13
	12H	20.64	21.70	21.07	22.08	22.51	15.36	16.42	15.79	16.80	17.23
4H	2H	17.21	18.47	17.61	18.81	19.19	13.04	14.30	13.44	14.65	15.02
	3H	19.23	20.27	19.64	20.67	21.07	14.86	15.90	15.27	16.31	16.71
	4H	20.04	20.98	20.48	21.40	21.84	15.61	16.55	16.04	16.96	17.40
	6H	20.73	21.54	21.18	21.99	22.45	16.22	17.03	16.67	17.48	17.94
	8H	20.96	21.72	21.42	22.16	22.63	16.43	17.19	16.89	17.64	18.11
	12H	21.11	21.79	21.59	22.27	22.74	16.60	17.28	17.08	17.76	18.23
8H	4H	20.07	20.83	20.53	21.28	21.74	15.99	16.76	16.46	17.20	17.67
	6H	20.80	21.43	21.29	21.92	22.40	16.72	17.35	17.22	17.84	18.32
	8H	21.07	21.63	21.58	22.14	22.63	17.01	17.57	17.52	18.08	18.57
	12H	21.27	21.77	21.78	22.27	22.83	17.25	17.75	17.76	18.24	18.81
12H	4H	20.05	20.74	20.54	21.21	21.69	16.05	16.73	16.53	17.21	17.68
	6H	20.78	21.35	21.29	21.86	22.35	16.80	17.37	17.32	17.88	18.37
	8H	21.09	21.59	21.60	22.08	22.64	17.15	17.65	17.66	18.14	18.70