

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055763

Luminaire Tested: S123R3DR-H340D950-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055763
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-H340D950-X4F0-XX-UDD-FLL-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

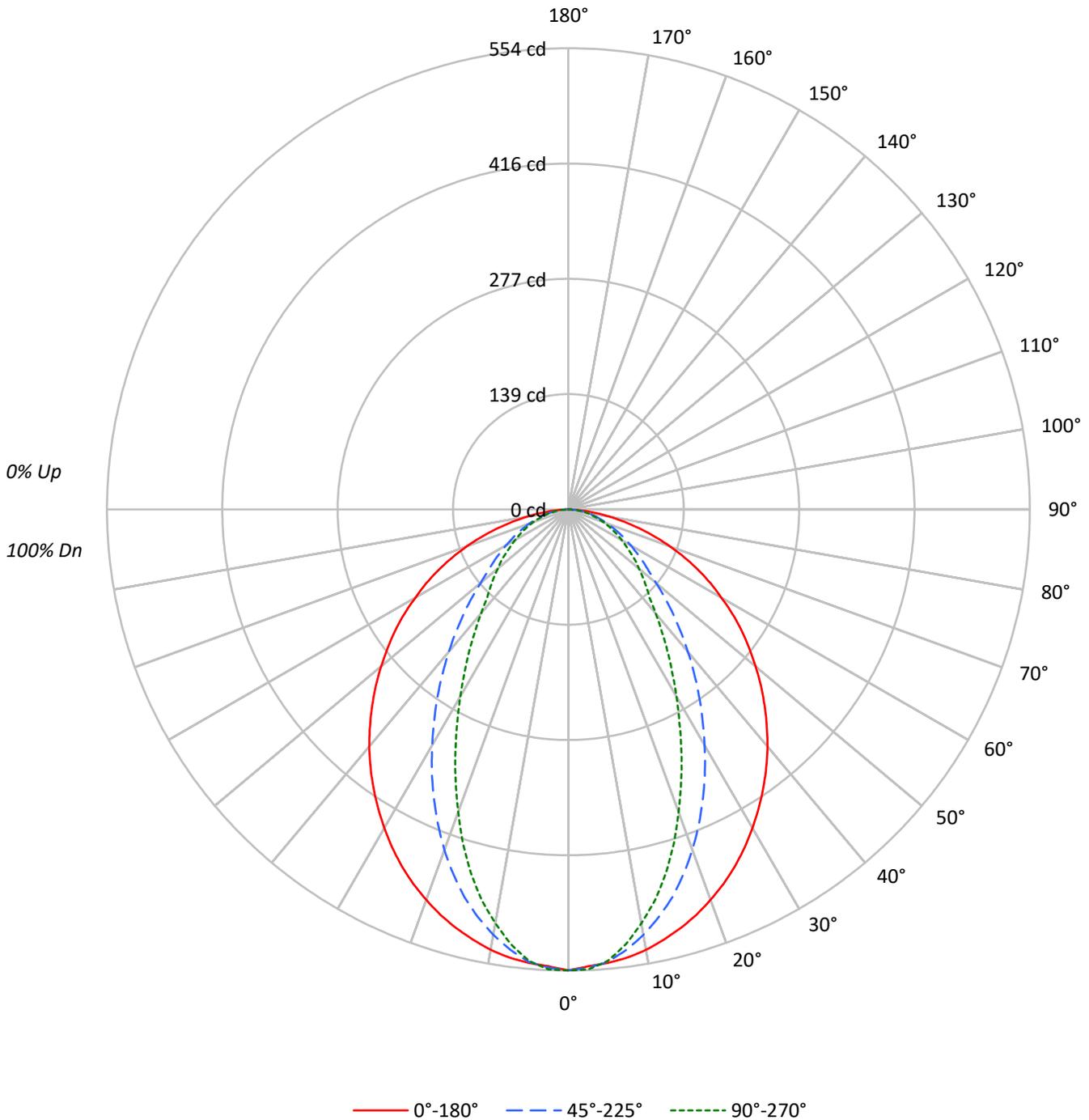
Lumens per Lamp: N/A
Luminaire Lumens: 971.3 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	6677	6677	6677
5°	6618	6602	6587
10°	6577	6354	6181
15°	6499	6019	5645
20°	6404	5585	4964
25°	6292	5086	4270
30°	6153	4550	3610
35°	6005	4024	3048
40°	5855	3514	2562
45°	5678	3030	2261
50°	5501	2579	2074
55°	5337	2300	1915
60°	5114	2079	1787
65°	4904	1903	1677
70°	4572	1752	1576
75°	4090	1621	1486
80°	3506	1493	1382
85°	2462	1369	1314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5678 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	5.3
10°-20°	135.8	14.0
20°-30°	178.9	18.4
30°-40°	181.6	18.7
40°-50°	157.9	16.3
50°-60°	123.7	12.7
60°-70°	84.0	8.7
70°-80°	45.5	4.7
80°-90°	12.5	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°	366.1	37.7
0°-40°	547.7	56.4
0°-60°	829.2	85.4
0°-90°	971.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	971.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	547	553	546	541	544	52
15°	521	513	482	458	452	147
25°	473	444	382	335	321	218
35°	408	360	273	221	207	255
45°	333	267	178	137	133	257
55°	254	176	109	93	91	227
65°	172	95	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°	553.8	553.8	553.8	553.8	553.8
2.5°	549.3	556.3	550.9	551.3	553.0
5°	546.8	553.4	545.5	540.6	544.3
7.5°	543.0	548.0	533.5	525.6	526.9
10°	537.2	538.9	519.0	506.6	504.9
12.5°	529.4	526.5	501.6	483.4	480.5
15°	520.7	513.2	482.2	458.5	452.3
17.5°	510.7	498.3	459.4	430.4	420.8
20°	499.1	481.7	435.3	398.5	386.9
22.5°	486.7	464.3	409.2	365.8	353.7
25°	473.0	444.5	382.3	334.7	321.0
27.5°	458.1	424.6	355.0	304.0	288.7
30°	442.0	403.9	326.8	274.2	259.3
32.5°	425.4	381.9	299.9	246.5	232.0
35°	408.0	359.5	273.4	221.2	207.1
37.5°	390.2	336.8	247.7	197.2	183.9
40°	372.0	313.6	223.3	174.8	162.8
42.5°	352.5	290.4	199.7	153.7	144.6
45°	333.0	267.2	177.7	137.1	132.6
47.5°	313.6	243.6	157.0	125.5	121.4
50°	293.3	220.8	137.5	114.7	110.6
52.5°	273.4	198.4	121.4	104.4	101.5
55°	253.9	176.5	109.4	93.2	91.1
57.5°	233.6	154.9	97.3	84.5	82.0
60°	212.1	134.2	86.2	75.4	74.1
62.5°	192.6	114.7	76.2	67.5	66.3
65°	171.9	95.3	66.7	59.6	58.8
67.5°	150.8	79.1	58.0	52.2	51.8
70°	129.7	66.7	49.7	45.1	44.7
72.5°	108.9	55.1	41.8	38.9	38.1
75°	87.8	43.9	34.8	32.3	31.9
77.5°	68.8	34.0	27.8	26.1	25.7
80°	50.5	25.3	21.5	20.3	19.9
82.5°	33.1	17.4	15.3	14.5	14.5
85°	17.8	10.8	9.9	9.1	9.5
87.5°	6.2	4.6	4.6	4.1	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	17.15	18.65	17.52	18.96	19.27	12.30	13.80	12.67	14.11	14.42
	3H	19.04	20.38	19.42	20.71	21.07	13.93	15.27	14.31	15.60	15.96
	4H	19.80	21.05	20.20	21.40	21.78	14.57	15.82	14.97	16.17	16.55
	6H	20.36	21.52	20.77	21.89	22.28	15.06	16.22	15.47	16.58	16.98
	8H	20.53	21.64	20.96	22.03	22.43	15.23	16.33	15.66	16.72	17.12
	12H	20.63	21.69	21.06	22.07	22.50	15.35	16.41	15.78	16.79	17.22
4H	2H	17.20	18.46	17.60	18.81	19.18	13.03	14.29	13.43	14.64	15.02
	3H	19.22	20.26	19.63	20.66	21.06	14.85	15.90	15.26	16.30	16.70
	4H	20.03	20.97	20.47	21.39	21.83	15.60	16.54	16.03	16.95	17.39
	6H	20.72	21.54	21.18	21.98	22.44	16.21	17.03	16.67	17.47	17.93
	8H	20.95	21.71	21.41	22.16	22.62	16.42	17.19	16.89	17.63	18.10
	12H	21.10	21.78	21.58	22.26	22.73	16.59	17.27	17.07	17.75	18.22
8H	4H	20.06	20.82	20.52	21.27	21.74	15.98	16.75	16.45	17.19	17.66
	6H	20.79	21.42	21.29	21.91	22.39	16.71	17.34	17.21	17.83	18.31
	8H	21.06	21.62	21.57	22.13	22.62	17.00	17.56	17.51	18.07	18.56
	12H	21.27	21.77	21.78	22.26	22.82	17.24	17.74	17.75	18.23	18.80
12H	4H	20.04	20.73	20.53	21.21	21.68	16.04	16.72	16.52	17.20	17.67
	6H	20.77	21.34	21.29	21.85	22.34	16.79	17.36	17.31	17.87	18.36
	8H	21.08	21.58	21.59	22.07	22.64	17.14	17.64	17.65	18.13	18.70