

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: P1055569

Luminaire Tested: S123R3DR-S1000D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055569
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-S1000D940-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

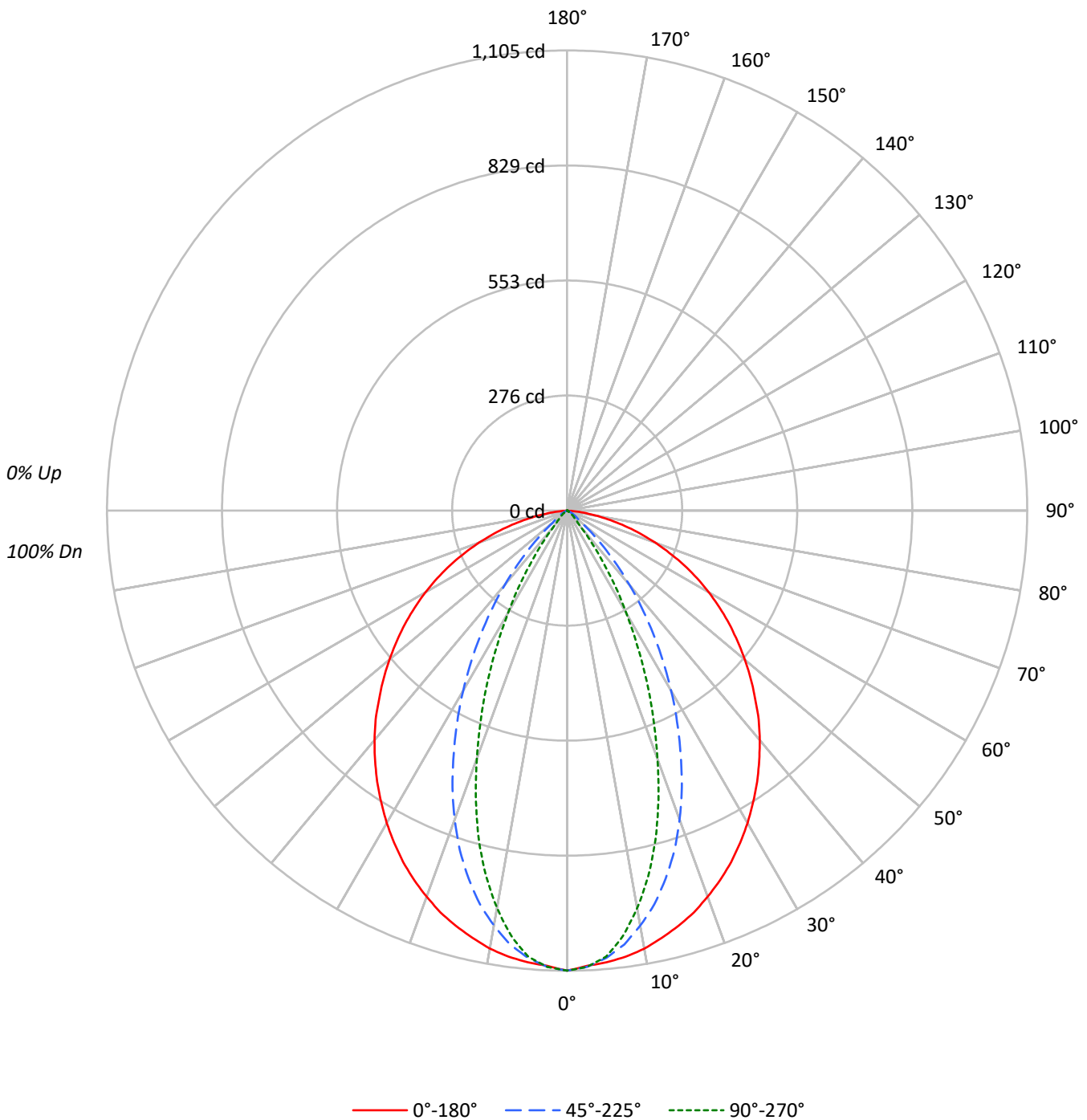
Lumens per Lamp: N/A
Luminaire Lumens: 1292.8 lumens
Efficiency: N/A
Efficacy: 37.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	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°	13319	13319	13319
5°	13175	13050	13009
10°	13075	12387	11868
15°	12887	11413	10226
20°	12658	10129	8145
25°	12393	8582	6006
30°	12060	6955	3940
35°	11705	5296	2159
40°	11325	3661	740
45°	10883	2130	430
50°	10445	838	259
55°	9995	530	120
60°	9476	333	55
65°	8827	163	31
70°	7917	81	39
75°	6726	51	51
80°	5013	76	0
85°	1909	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10883 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	7.8
10°-20°	257.0	19.9
20°-30°	306.6	23.7
30°-40°	260.1	20.1
40°-50°	176.8	13.7
50°-60°	109.6	8.5
60°-70°	55.5	4.3
70°-80°	22.6	1.7
80°-90°	3.5	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°	664.9	51.4
0°-40°	925.0	71.5
0°-60°	1211.3	93.7
0°-90°	1292.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1292.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1105	1105	1105	1105	1105	
5°	1089	1099	1078	1070	1075	103
15°	1032	1006	914	842	819	291
25°	932	844	645	498	452	429
35°	795	638	360	194	147	497
45°	638	418	125	31	25	493
55°	476	211	25	9	6	425
65°	309	52	6	1	1	306
75°	144	9	1	1	1	154
85°	14	0	0	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1104.7	1104.7	1104.7	1104.7	1104.7
2.5°	1094.3	1109.2	1096.6	1095.5	1096.6
5°	1088.6	1098.9	1078.3	1070.3	1074.9
7.5°	1080.6	1085.2	1050.8	1030.2	1030.2
10°	1068.0	1064.5	1011.8	977.5	969.4
12.5°	1050.8	1037.0	968.3	914.4	899.5
15°	1032.5	1006.1	914.4	842.2	819.3
17.5°	1011.8	971.7	856.0	762.0	728.8
20°	986.6	932.8	789.5	674.9	634.8
22.5°	960.3	890.4	719.6	585.6	540.9
25°	931.6	844.5	645.1	498.5	451.5
27.5°	899.5	796.4	571.8	414.8	363.3
30°	866.3	746.0	499.6	334.6	283.0
32.5°	830.8	693.3	427.4	261.3	213.1
35°	795.3	638.3	359.8	193.7	146.7
37.5°	757.4	583.3	294.5	134.1	92.8
40°	719.6	529.4	232.6	84.8	47.0
42.5°	680.7	473.3	176.5	42.4	32.1
45°	638.3	418.3	124.9	30.9	25.2
47.5°	598.2	365.5	82.5	25.2	19.5
50°	556.9	312.8	44.7	18.3	13.8
52.5°	515.7	262.4	32.1	13.8	9.2
55°	475.5	210.8	25.2	9.2	5.7
57.5°	434.3	166.2	19.5	5.7	3.4
60°	393.0	122.6	13.8	3.4	2.3
62.5°	351.8	84.8	9.2	2.3	1.1
65°	309.4	51.6	5.7	1.1	1.1
67.5°	265.8	35.5	3.4	1.1	1.1
70°	224.6	25.2	2.3	1.1	1.1
72.5°	183.3	16.0	1.1	1.1	0.0
75°	144.4	9.2	1.1	1.1	1.1
77.5°	106.6	3.4	1.1	1.1	0.0
80°	72.2	1.1	1.1	1.1	0.0
82.5°	40.1	0.0	1.1	1.1	0.0
85°	13.8	0.0	0.0	1.1	0.0
87.5°	0.0	0.0	0.0	1.1	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	18.04	19.33	18.41	19.64	19.95	0.00	0.00	0.00	0.00	0.00
	3H	19.99	21.12	20.37	21.45	21.82	0.00	0.00	0.00	0.00	0.00
	4H	20.82	21.87	21.22	22.22	22.61	0.00	0.00	0.00	0.00	0.00
	6H	21.37	22.34	21.79	22.71	23.10	0.00	0.00	0.00	0.00	0.00
	8H	21.50	22.41	21.93	22.80	23.21	0.00	0.00	0.00	0.00	0.00
	12H	21.52	22.40	21.95	22.78	23.21	0.00	0.00	0.00	0.00	0.00
4H	2H	17.81	18.86	18.21	19.21	19.60	0.00	0.00	0.00	0.00	0.00
	3H	19.76	20.62	20.17	21.03	21.43	0.00	0.00	0.00	0.00	0.00
	4H	20.57	21.34	21.01	21.76	22.21	0.00	0.00	0.00	0.00	0.00
	6H	21.17	21.84	21.64	22.28	22.75	0.00	0.00	0.00	0.00	0.00
	8H	21.33	21.94	21.80	22.39	22.86	0.00	0.00	0.00	0.00	0.00
	12H	21.37	21.92	21.86	22.40	22.88	0.00	0.00	0.00	0.00	0.00
8H	4H	20.43	21.05	20.90	21.50	21.97	0.00	0.00	0.00	0.00	0.00
	6H	21.01	21.52	21.52	22.01	22.49	0.00	0.00	0.00	0.00	0.00
	8H	21.16	21.61	21.69	22.13	22.62	0.00	0.00	0.00	0.00	0.00
	12H	21.22	21.62	21.74	22.11	22.68	0.00	0.00	0.00	0.00	0.00
12H	4H	20.38	20.93	20.87	21.41	21.89	0.00	0.00	0.00	0.00	0.00
	6H	20.95	21.40	21.47	21.92	22.41	0.00	0.00	0.00	0.00	0.00
	8H	21.12	21.51	21.63	22.01	22.58	0.00	0.00	0.00	0.00	0.00