

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: P1055554

Luminaire Tested: S123R3DR-S1000D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055554
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-S1000D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

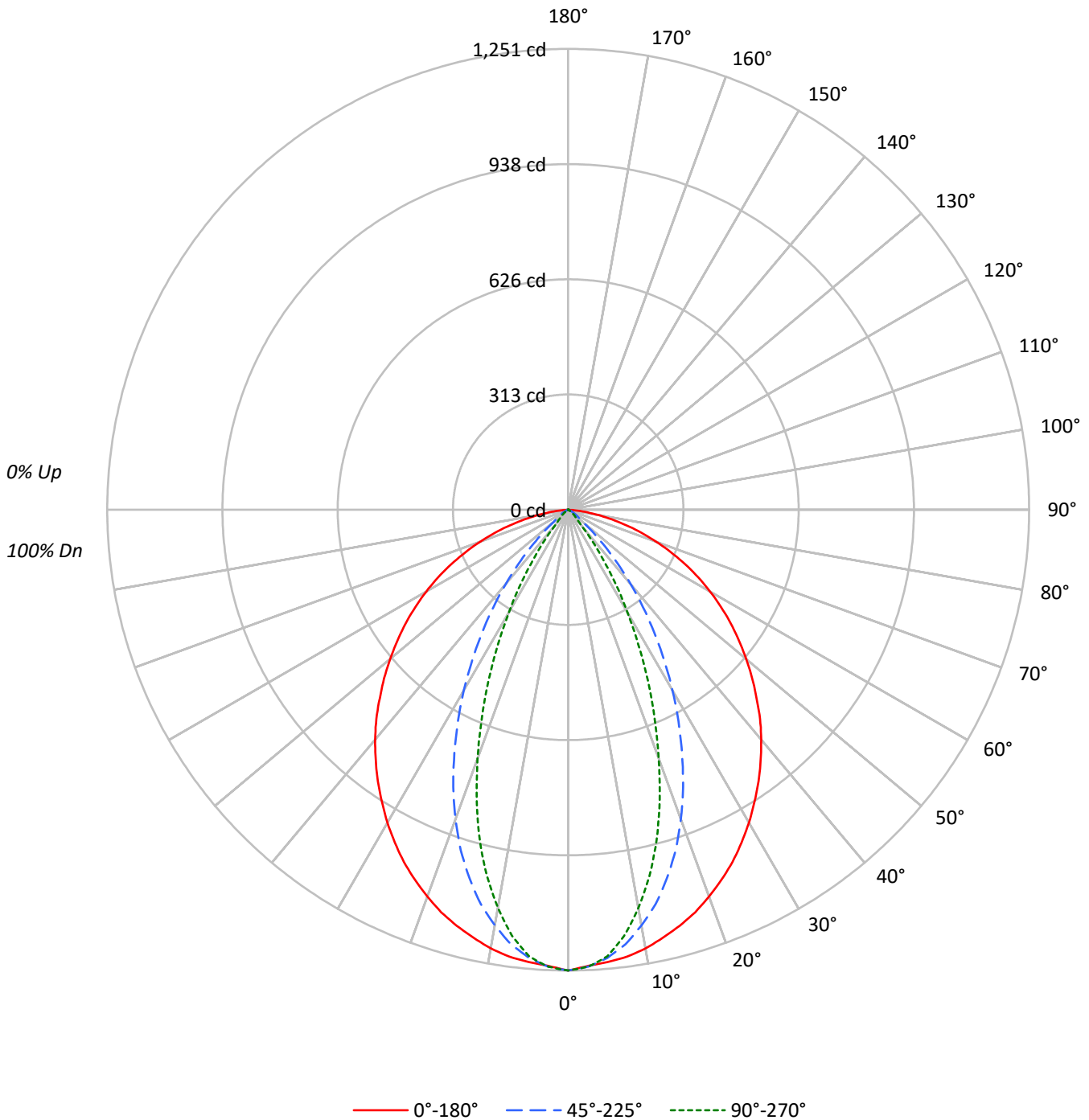
Lumens per Lamp: N/A
Luminaire Lumens: 1464.2 lumens
Efficiency: N/A
Efficacy: 42.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	57	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°	15083	15083	15083
5°	14921	14780	14732
10°	14807	14029	13441
15°	14595	12926	11582
20°	14336	11471	9224
25°	14036	9719	6802
30°	13658	7877	4462
35°	13255	5998	2445
40°	12827	4146	837
45°	12324	2413	488
50°	11830	949	293
55°	11321	601	137
60°	10733	376	63
65°	9996	185	37
70°	8968	92	46
75°	7616	61	61
80°	5679	90	0
85°	2158	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12324 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	7.8
10°-20°	291.1	19.9
20°-30°	347.2	23.7
30°-40°	294.5	20.1
40°-50°	200.2	13.7
50°-60°	124.1	8.5
60°-70°	62.9	4.3
70°-80°	25.6	1.8
80°-90°	3.9	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°	753.0	51.4
0°-40°	1047.5	71.5
0°-60°	1371.8	93.7
0°-90°	1464.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1464.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1233	1244	1221	1212	1217	117
15°	1169	1139	1036	954	928	330
25°	1055	956	731	564	511	485
35°	901	723	408	219	166	563
45°	723	474	142	35	29	558
55°	539	239	29	10	6	481
65°	350	58	6	1	1	346
75°	164	10	1	1	1	174
85°	16	0	0	1	0	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1251.0	1251.0	1251.0	1251.0	1251.0
2.5°	1239.3	1256.2	1241.9	1240.6	1241.9
5°	1232.9	1244.5	1221.2	1212.1	1217.3
7.5°	1223.8	1229.0	1190.0	1166.7	1166.7
10°	1209.5	1205.6	1145.9	1107.0	1097.9
12.5°	1190.0	1174.5	1096.6	1035.6	1018.7
15°	1169.3	1139.4	1035.6	953.8	927.9
17.5°	1145.9	1100.5	969.4	863.0	825.4
20°	1117.4	1056.4	894.1	764.4	718.9
22.5°	1087.5	1008.3	815.0	663.1	612.5
25°	1055.1	956.4	730.6	564.5	511.3
27.5°	1018.7	901.9	647.6	469.8	411.4
30°	981.1	844.8	565.8	378.9	320.5
32.5°	940.9	785.1	484.1	295.9	241.4
35°	900.6	722.8	407.5	219.3	166.1
37.5°	857.8	660.5	333.5	151.8	105.1
40°	815.0	599.6	263.4	96.0	53.2
42.5°	770.9	536.0	199.9	48.0	36.3
45°	722.8	473.7	141.5	35.0	28.6
47.5°	677.4	414.0	93.4	28.6	22.1
50°	630.7	354.3	50.6	20.8	15.6
52.5°	584.0	297.2	36.3	15.6	10.4
55°	538.6	238.8	28.6	10.4	6.5
57.5°	491.8	188.2	22.1	6.5	3.9
60°	445.1	138.9	15.6	3.9	2.6
62.5°	398.4	96.0	10.4	2.6	1.3
65°	350.4	58.4	6.5	1.3	1.3
67.5°	301.1	40.2	3.9	1.3	1.3
70°	254.4	28.6	2.6	1.3	1.3
72.5°	207.6	18.2	1.3	1.3	0.0
75°	163.5	10.4	1.3	1.3	1.3
77.5°	120.7	3.9	1.3	1.3	0.0
80°	81.8	1.3	1.3	1.3	0.0
82.5°	45.4	0.0	1.3	1.3	0.0
85°	15.6	0.0	0.0	1.3	0.0
87.5°	0.0	0.0	0.0	1.3	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	18.48	19.76	18.84	20.07	20.38	0.00	0.00	0.00	0.00	0.00
	3H	20.42	21.56	20.80	21.89	22.25	0.00	0.00	0.00	0.00	0.00
	4H	21.25	22.30	21.65	22.66	23.04	0.00	0.00	0.00	0.00	0.00
	6H	21.80	22.77	22.22	23.14	23.54	0.00	0.00	0.00	0.00	0.00
	8H	21.93	22.84	22.36	23.24	23.64	0.00	0.00	0.00	0.00	0.00
	12H	21.95	22.83	22.39	23.21	23.64	0.00	0.00	0.00	0.00	0.00
4H	2H	18.24	19.30	18.64	19.65	20.03	0.00	0.00	0.00	0.00	0.00
	3H	20.19	21.05	20.61	21.46	21.86	0.00	0.00	0.00	0.00	0.00
	4H	21.01	21.78	21.44	22.20	22.64	0.00	0.00	0.00	0.00	0.00
	6H	21.61	22.27	22.07	22.72	23.18	0.00	0.00	0.00	0.00	0.00
	8H	21.76	22.38	22.23	22.83	23.30	0.00	0.00	0.00	0.00	0.00
	12H	21.81	22.35	22.29	22.83	23.31	0.00	0.00	0.00	0.00	0.00
8H	4H	20.86	21.48	21.33	21.93	22.40	0.00	0.00	0.00	0.00	0.00
	6H	21.45	21.95	21.95	22.45	22.93	0.00	0.00	0.00	0.00	0.00
	8H	21.60	22.05	22.12	22.56	23.05	0.00	0.00	0.00	0.00	0.00
	12H	21.65	22.05	22.17	22.54	23.12	0.00	0.00	0.00	0.00	0.00
12H	4H	20.82	21.36	21.30	21.84	22.32	0.00	0.00	0.00	0.00	0.00
	6H	21.38	21.83	21.91	22.35	22.84	0.00	0.00	0.00	0.00	0.00
	8H	21.55	21.95	22.07	22.44	23.01	0.00	0.00	0.00	0.00	0.00