

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: P1055568

Luminaire Tested: S123R3DR-S1000D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055568
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-S1000D935-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

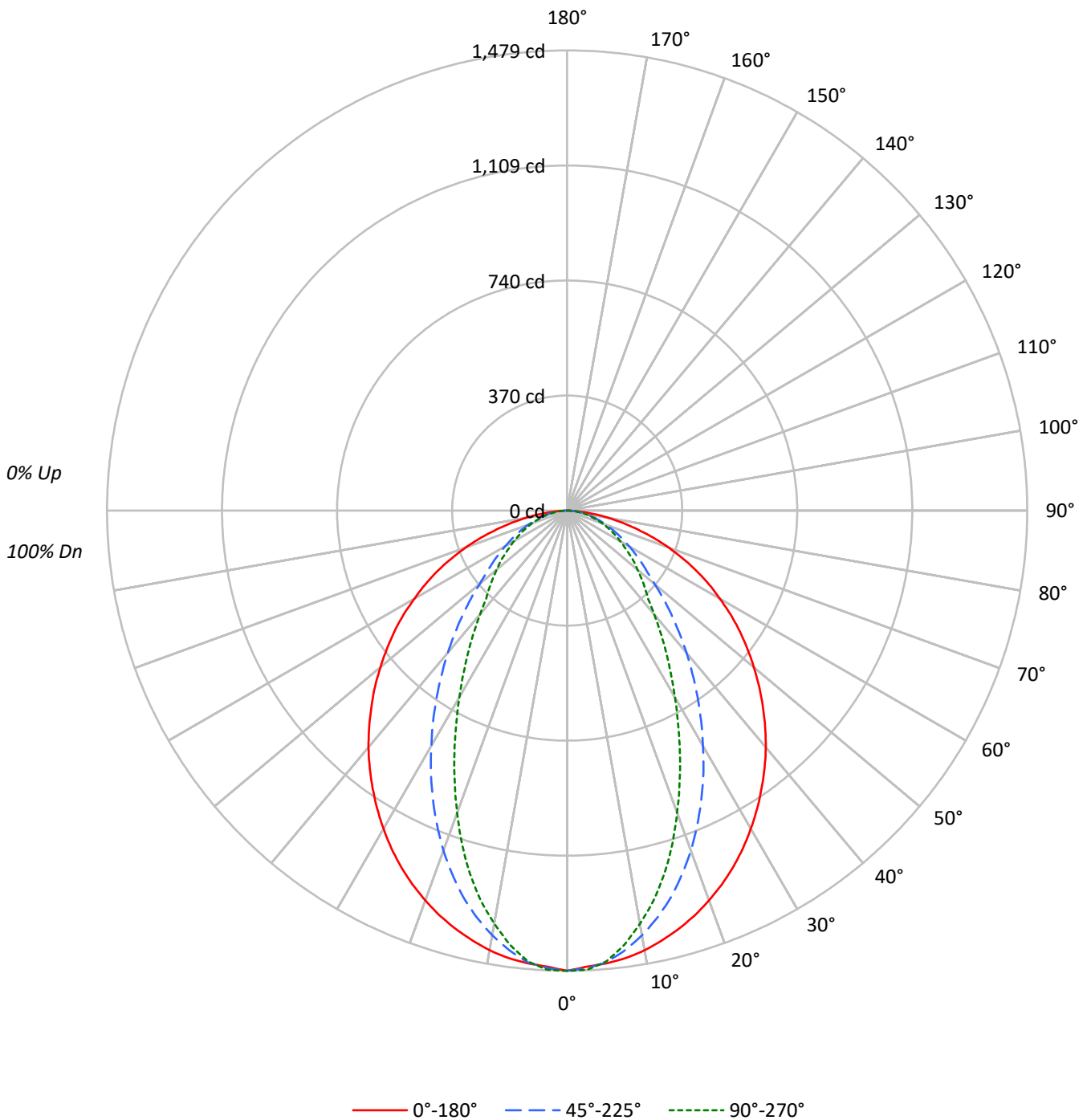
Lumens per Lamp: N/A
Luminaire Lumens: 2594.4 lumens
Efficiency: N/A
Efficacy: 74.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17835	17835	17835
5°	17676	17636	17596
10°	17568	16973	16511
15°	17360	16075	15080
20°	17106	14920	13259
25°	16809	13585	11407
30°	16436	12154	9642
35°	16040	10747	8142
40°	15638	9386	6843
45°	15168	8094	6038
50°	14694	6889	5541
55°	14256	6140	5116
60°	13660	5548	4777
65°	13100	5081	4482
70°	12207	4681	4212
75°	10928	4328	3969
80°	9373	3992	3687
85°	6585	3680	3514

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15168 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	5.3
10°-20°	362.8	14.0
20°-30°	477.9	18.4
30°-40°	485.1	18.7
40°-50°	421.6	16.3
50°-60°	330.3	12.7
60°-70°	224.4	8.7
70°-80°	121.6	4.7
80°-90°	33.5	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°	977.9	37.7
0°-40°	1462.9	56.4
0°-60°	2214.9	85.4
0°-90°	2594.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2594.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1460	1478	1457	1444	1454	139
15°	1391	1371	1288	1225	1208	392
25°	1264	1187	1021	894	858	582
35°	1090	960	730	591	553	682
45°	890	714	475	366	354	687
55°	678	471	292	249	243	605
65°	459	254	178	159	157	453
75°	235	117	93	86	85	250
85°	48	29	27	24	25	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.3	1479.3	1479.3	1479.3	1479.3
2.5°	1467.1	1485.9	1471.6	1472.7	1477.1
5°	1460.5	1478.2	1457.2	1443.9	1453.9
7.5°	1450.5	1463.8	1425.1	1404.1	1407.4
10°	1435.0	1439.5	1386.4	1353.2	1348.7
12.5°	1414.0	1406.3	1339.9	1291.2	1283.5
15°	1390.8	1370.9	1287.9	1224.8	1208.2
17.5°	1364.2	1331.0	1227.0	1149.6	1124.1
20°	1333.3	1286.8	1162.9	1064.4	1033.4
22.5°	1300.1	1240.3	1093.2	977.0	944.9
25°	1263.6	1187.2	1021.2	894.0	857.5
27.5°	1223.7	1134.1	948.2	812.1	771.2
30°	1180.6	1078.8	873.0	732.5	692.6
32.5°	1136.3	1020.1	801.1	658.3	619.6
35°	1089.8	960.4	730.2	590.8	553.2
37.5°	1042.3	899.5	661.6	526.7	491.3
40°	993.6	837.6	596.4	466.9	434.8
42.5°	941.6	775.6	533.3	410.5	386.1
45°	889.6	713.7	474.7	366.2	354.1
47.5°	837.6	650.6	419.3	335.3	324.2
50°	783.4	589.7	367.3	306.5	295.4
52.5°	730.2	530.0	324.2	278.8	271.1
55°	678.2	471.3	292.1	248.9	243.4
57.5°	624.0	413.8	260.0	225.7	219.1
60°	566.5	358.5	230.1	201.4	198.1
62.5°	514.5	306.5	203.6	180.3	177.0
65°	459.2	254.5	178.1	159.3	157.1
67.5°	402.7	211.3	154.9	139.4	138.3
70°	346.3	178.1	132.8	120.6	119.5
72.5°	291.0	147.2	111.8	104.0	101.8
75°	234.6	117.3	92.9	86.3	85.2
77.5°	183.7	90.7	74.1	69.7	68.6
80°	135.0	67.5	57.5	54.2	53.1
82.5°	88.5	46.5	40.9	38.7	38.7
85°	47.6	28.8	26.6	24.3	25.4
87.5°	16.6	12.2	12.2	11.1	12.2
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	20.57	22.06	20.93	22.37	22.69	15.72	17.21	16.08	17.52	17.84
	3H	22.45	23.79	22.83	24.12	24.48	17.34	18.68	17.72	19.01	19.37
	4H	23.21	24.47	23.61	24.82	25.19	17.98	19.24	18.38	19.59	19.97
	6H	23.78	24.94	24.19	25.30	25.69	18.47	19.63	18.88	20.00	20.39
	8H	23.95	25.05	24.38	25.44	25.84	18.64	19.75	19.07	20.14	20.54
	12H	24.05	25.10	24.48	25.48	25.91	18.77	19.82	19.20	20.20	20.63
4H	2H	20.61	21.87	21.01	22.22	22.60	16.45	17.70	16.85	18.05	18.43
	3H	22.63	23.67	23.04	24.07	24.48	18.27	19.31	18.68	19.71	20.11
	4H	23.45	24.39	23.88	24.80	25.24	19.01	19.95	19.45	20.37	20.81
	6H	24.13	24.95	24.59	25.39	25.85	19.62	20.44	20.08	20.88	21.34
	8H	24.36	25.13	24.83	25.57	26.04	19.84	20.60	20.30	21.04	21.51
	12H	24.51	25.20	25.00	25.67	26.15	20.00	20.69	20.49	21.16	21.64
8H	4H	23.47	24.24	23.94	24.68	25.15	19.40	20.16	19.86	20.60	21.07
	6H	24.20	24.83	24.70	25.32	25.80	20.12	20.76	20.62	21.25	21.72
	8H	24.47	25.04	24.99	25.55	26.04	20.41	20.98	20.93	21.49	21.98
	12H	24.68	25.18	25.19	25.67	26.24	20.66	21.16	21.17	21.65	22.21
12H	4H	23.46	24.14	23.94	24.62	25.09	19.45	20.13	19.93	20.61	21.08
	6H	24.19	24.75	24.70	25.26	25.75	20.21	20.77	20.72	21.28	21.77
	8H	24.49	24.99	25.00	25.48	26.05	20.55	21.05	21.06	21.55	22.11