

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: P1055574

Luminaire Tested: S123R3DR-S1000D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055574
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-S1000D950-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

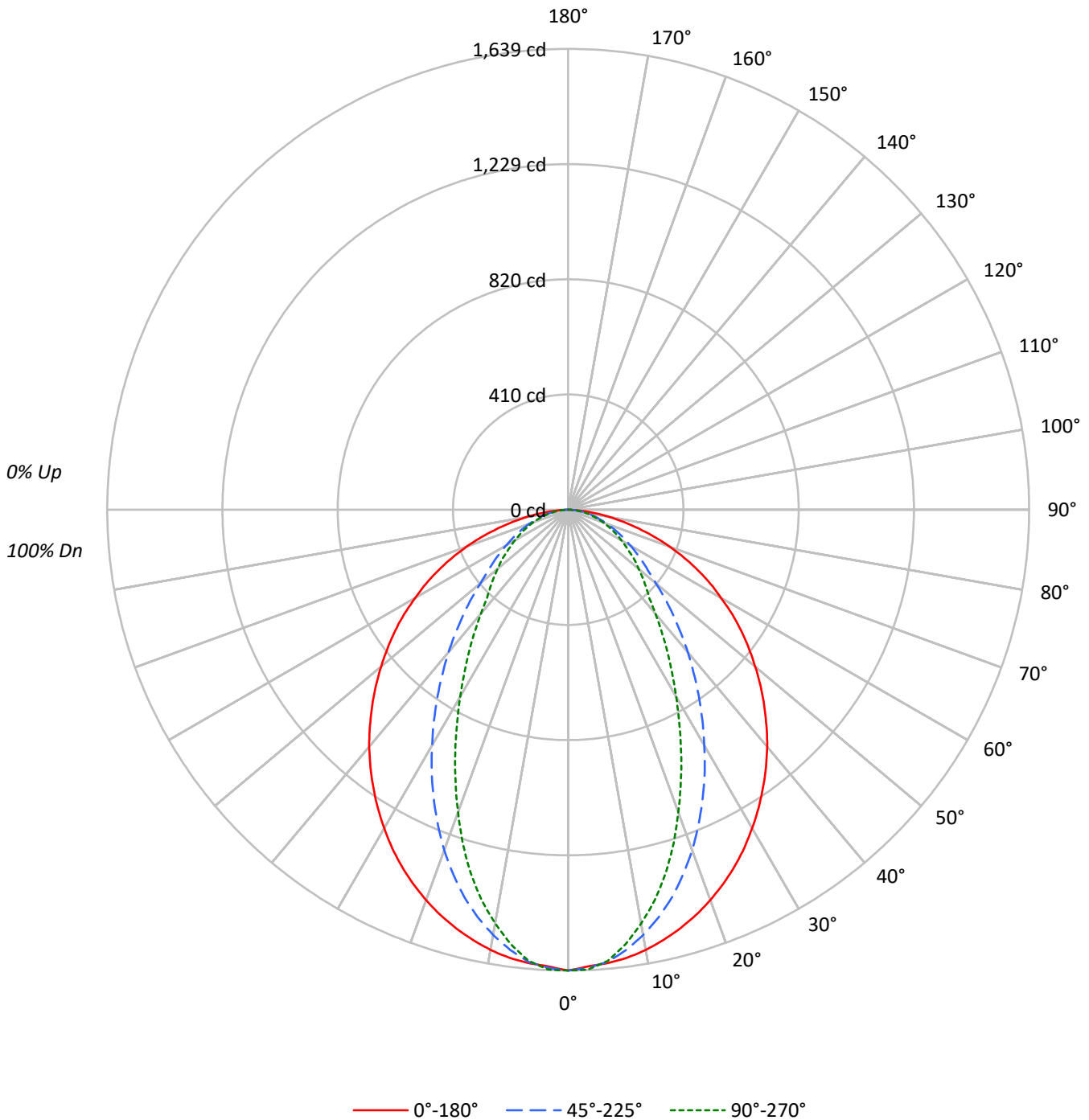
Lumens per Lamp: N/A
Luminaire Lumens: 2874.7 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (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°	19762	19762	19762
5°	19585	19541	19496
10°	19467	18806	18295
15°	19234	17811	16709
20°	18954	16532	14691
25°	18624	15053	12639
30°	18211	13466	10683
35°	17774	11908	9022
40°	17327	10400	7583
45°	16807	8967	6689
50°	16281	7634	6139
55°	15796	6804	5669
60°	15136	6149	5290
65°	14515	5631	4967
70°	13526	5185	4667
75°	12107	4798	4397
80°	10387	4423	4082
85°	7290	4067	3901

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16807 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	5.3
10°-20°	402.0	14.0
20°-30°	529.5	18.4
30°-40°	537.5	18.7
40°-50°	467.2	16.3
50°-60°	366.0	12.7
60°-70°	248.7	8.7
70°-80°	134.8	4.7
80°-90°	37.1	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°	1083.5	37.7
0°-40°	1620.9	56.4
0°-60°	2454.1	85.4
0°-90°	2874.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2874.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1639	1639	1639	1639	1639	
5°	1618	1638	1615	1600	1611	154
15°	1541	1519	1427	1357	1339	434
25°	1400	1315	1132	991	950	644
35°	1208	1064	809	655	613	755
45°	986	791	526	406	392	761
55°	752	522	324	276	270	671
65°	509	282	197	176	174	502
75°	260	130	103	96	94	277
85°	53	32	29	27	28	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1639.1	1639.1	1639.1	1639.1	1639.1
2.5°	1625.6	1646.5	1630.5	1631.7	1636.6
5°	1618.3	1637.9	1614.6	1599.9	1610.9
7.5°	1607.2	1621.9	1579.0	1555.7	1559.4
10°	1590.1	1595.0	1536.1	1499.3	1494.4
12.5°	1566.8	1558.2	1484.6	1430.7	1422.1
15°	1541.0	1519.0	1427.0	1357.1	1338.7
17.5°	1511.6	1474.8	1359.6	1273.8	1245.6
20°	1477.3	1425.8	1288.5	1179.4	1145.0
22.5°	1440.5	1374.3	1211.2	1082.5	1047.0
25°	1400.0	1315.4	1131.6	990.6	950.1
27.5°	1355.9	1256.6	1050.6	899.8	854.5
30°	1308.1	1195.3	967.3	811.6	767.4
32.5°	1259.1	1130.3	887.6	729.4	686.5
35°	1207.6	1064.1	809.1	654.7	613.0
37.5°	1154.8	996.7	733.1	583.6	544.3
40°	1100.9	928.0	660.8	517.4	481.8
42.5°	1043.3	859.4	590.9	454.8	427.9
45°	985.7	790.7	525.9	405.8	392.3
47.5°	928.0	720.9	464.6	371.5	359.2
50°	868.0	653.4	407.0	339.6	327.3
52.5°	809.1	587.2	359.2	308.9	300.4
55°	751.5	522.3	323.7	275.8	269.7
57.5°	691.4	458.5	288.1	250.1	242.7
60°	627.7	397.2	255.0	223.1	219.4
62.5°	570.1	339.6	225.6	199.8	196.2
65°	508.8	282.0	197.4	176.5	174.1
67.5°	446.2	234.2	171.6	154.5	153.2
70°	383.7	197.4	147.1	133.6	132.4
72.5°	322.4	163.1	123.8	115.2	112.8
75°	259.9	130.0	103.0	95.6	94.4
77.5°	203.5	100.5	82.1	77.2	76.0
80°	149.6	74.8	63.7	60.1	58.8
82.5°	98.1	51.5	45.4	42.9	42.9
85°	52.7	31.9	29.4	27.0	28.2
87.5°	18.4	13.5	13.5	12.3	13.5
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	20.92	22.42	21.29	22.73	23.04	16.07	17.57	16.44	17.88	18.19
	3H	22.81	24.15	23.19	24.48	24.84	17.70	19.04	18.08	19.37	19.73
	4H	23.57	24.82	23.97	25.17	25.55	18.34	19.59	18.74	19.94	20.32
	6H	24.13	25.29	24.54	25.66	26.05	18.83	19.99	19.24	20.35	20.75
	8H	24.31	25.41	24.73	25.80	26.20	19.00	20.10	19.42	20.49	20.89
	12H	24.40	25.46	24.83	25.84	26.27	19.12	20.18	19.55	20.56	20.99
4H	2H	20.97	22.23	21.37	22.58	22.95	16.80	18.06	17.20	18.41	18.79
	3H	22.99	24.03	23.40	24.43	24.83	18.62	19.67	19.03	20.07	20.47
	4H	23.81	24.74	24.24	25.16	25.60	19.37	20.31	19.80	20.72	21.16
	6H	24.49	25.31	24.95	25.75	26.21	19.98	20.79	20.44	21.24	21.70
	8H	24.72	25.48	25.18	25.93	26.39	20.19	20.96	20.66	21.40	21.87
	12H	24.87	25.55	25.35	26.03	26.50	20.36	21.04	20.84	21.52	21.99
8H	4H	23.83	24.59	24.29	25.04	25.51	19.75	20.52	20.22	20.96	21.43
	6H	24.56	25.19	25.06	25.68	26.16	20.48	21.11	20.98	21.60	22.08
	8H	24.83	25.39	25.34	25.90	26.39	20.77	21.33	21.28	21.84	22.33
	12H	25.04	25.54	25.55	26.03	26.59	21.01	21.51	21.52	22.01	22.57
12H	4H	23.82	24.50	24.30	24.98	25.45	19.81	20.49	20.29	20.97	21.44
	6H	24.54	25.11	25.06	25.62	26.11	20.56	21.13	21.08	21.64	22.13
	8H	24.85	25.35	25.36	25.84	26.41	20.91	21.41	21.42	21.90	22.47