

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: P1055221

Luminaire Tested: S122R3DR-S485D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S485D950-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

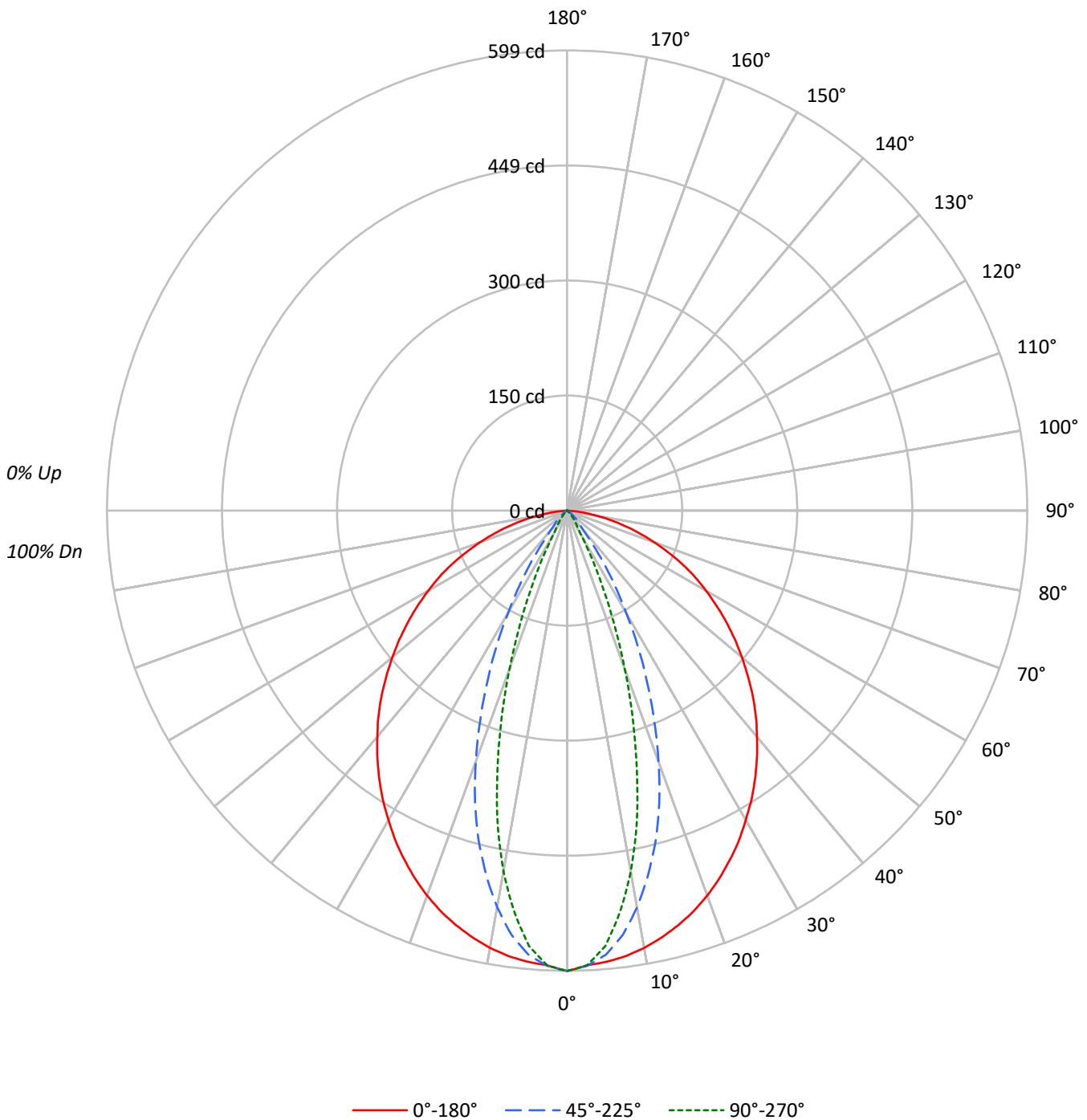
Lumens per Lamp: N/A
Luminaire Lumens: 545.3 lumens
Efficiency: N/A
Efficacy: 28.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81				81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56				56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52				52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49				49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45				45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43				43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11356	11356	11356
5°	11215	11032	10823
10°	11120	10087	9184
15°	10958	8728	6879
20°	10750	7014	4403
25°	10484	5140	2262
30°	10173	3360	739
35°	9862	1864	430
40°	9507	749	237
45°	9155	498	91
50°	8751	283	41
55°	8350	135	23
60°	7908	53	0
65°	7442	31	0
70°	6681	39	0
75°	5746	51	0
80°	4364	0	0
85°	1804	152	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9155 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	9.9
10°-20°	124.8	22.9
20°-30°	126.8	23.2
30°-40°	95.1	17.4
40°-50°	66.6	12.2
50°-60°	40.8	7.5
60°-70°	24.3	4.5
70°-80°	11.2	2.1
80°-90°	2.0	0.4
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°	305.3	56.0
0°-40°	400.4	73.4
0°-60°	507.8	93.1
0°-90°	545.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	545.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	599	599	599	599	599	
5°	590	595	580	569	569	56
15°	559	528	445	377	351	157
25°	502	413	246	140	108	231
35°	426	278	81	24	19	267
45°	342	147	19	6	3	263
55°	253	45	4	1	1	226
65°	166	13	1	1	0	164
75°	78	1	1	1	0	83
85°	8	0	1	1	0	14
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	599.4	599.4	599.4	599.4	599.4
2.5°	592.5	601.4	593.2	591.8	592.5
5°	589.7	595.2	580.1	569.1	569.1
7.5°	584.9	584.9	556.7	533.9	527.0
10°	578.0	570.4	524.3	487.8	477.4
12.5°	569.1	551.1	486.4	434.7	418.2
15°	558.7	528.4	445.0	376.8	350.7
17.5°	547.0	502.9	398.9	314.2	283.8
20°	533.2	475.4	347.9	250.1	218.4
22.5°	518.1	445.0	296.2	192.9	159.1
25°	501.5	413.4	245.9	140.5	108.2
27.5°	484.3	380.3	199.8	96.5	66.1
30°	465.0	345.8	153.6	57.2	33.8
32.5°	446.4	312.8	115.1	31.0	24.8
35°	426.4	277.6	80.6	24.1	18.6
37.5°	405.8	244.6	49.6	17.9	13.8
40°	384.4	210.8	30.3	13.1	9.6
42.5°	363.8	179.1	24.1	9.0	6.2
45°	341.7	146.7	18.6	5.5	3.4
47.5°	319.0	117.1	13.8	3.4	2.1
50°	296.9	90.9	9.6	2.1	1.4
52.5°	274.9	66.8	6.2	1.4	0.7
55°	252.8	44.8	4.1	1.4	0.7
57.5°	230.8	31.7	2.8	0.7	0.7
60°	208.7	24.8	1.4	0.7	0.0
62.5°	188.1	19.3	1.4	0.7	0.7
65°	166.0	13.1	0.7	0.7	0.0
67.5°	142.6	8.3	0.7	0.7	0.0
70°	120.6	4.8	0.7	0.7	0.0
72.5°	99.2	2.8	0.7	0.7	0.0
75°	78.5	1.4	0.7	0.7	0.0
77.5°	58.6	0.7	0.0	0.7	0.0
80°	40.0	0.0	0.0	0.7	0.0
82.5°	23.4	0.0	0.0	0.7	0.0
85°	8.3	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	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	14.65	15.91	15.02	16.23	16.54	0.00	0.00	0.00	0.00	0.00
	3H	18.40	19.51	18.78	19.84	20.21	0.00	0.00	0.00	0.00	0.00
	4H	19.71	20.75	20.11	21.10	21.48	0.00	0.00	0.00	0.00	0.00
	6H	20.56	21.52	20.98	21.89	22.28	0.00	0.00	0.00	0.00	0.00
	8H	20.77	21.68	21.21	22.07	22.48	0.00	0.00	0.00	0.00	0.00
	12H	20.84	21.70	21.27	22.09	22.52	0.00	0.00	0.00	0.00	0.00
4H	2H	14.41	15.45	14.81	15.80	16.18	0.00	0.00	0.00	0.00	0.00
	3H	18.15	19.00	18.56	19.41	19.81	0.00	0.00	0.00	0.00	0.00
	4H	19.44	20.21	19.88	20.63	21.07	0.00	0.00	0.00	0.00	0.00
	6H	20.36	21.02	20.83	21.47	21.94	0.00	0.00	0.00	0.00	0.00
	8H	20.62	21.23	21.09	21.68	22.15	0.00	0.00	0.00	0.00	0.00
	12H	20.72	21.26	21.21	21.75	22.22	0.00	0.00	0.00	0.00	0.00
8H	4H	19.30	19.91	19.77	20.36	20.83	0.00	0.00	0.00	0.00	0.00
	6H	20.20	20.70	20.71	21.20	21.68	0.00	0.00	0.00	0.00	0.00
	8H	20.46	20.90	20.98	21.42	21.91	0.00	0.00	0.00	0.00	0.00
	12H	20.58	20.97	21.09	21.46	22.03	0.00	0.00	0.00	0.00	0.00
12H	4H	19.25	19.79	19.74	20.27	20.75	0.00	0.00	0.00	0.00	0.00
	6H	20.14	20.58	20.66	21.10	21.59	0.00	0.00	0.00	0.00	0.00
	8H	20.41	20.80	20.93	21.30	21.87	0.00	0.00	0.00	0.00	0.00