

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: P1055354

Luminaire Tested: S122R3DR-H485D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H485D940-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

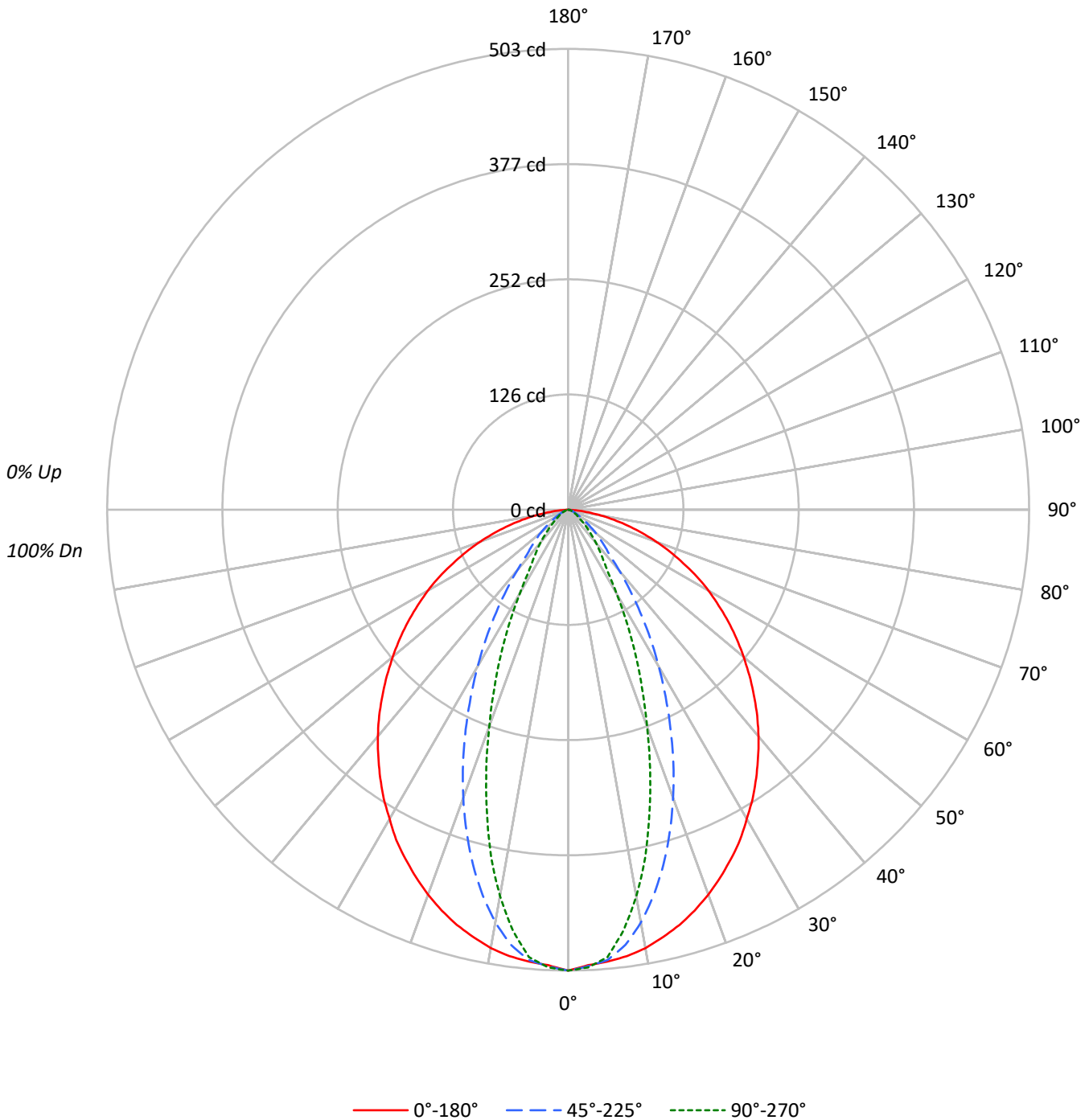
Lumens per Lamp: N/A
Luminaire Lumens: 576.6 lumens
Efficiency: N/A
Efficacy: 33.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9532	9532	9532
5°	9416	9382	9323
10°	9348	8801	8244
15°	9203	7873	6724
20°	9012	6750	5073
25°	8790	5529	3623
30°	8525	4316	2306
35°	8271	3166	1540
40°	7991	2134	1160
45°	7682	1503	825
50°	7360	1144	581
55°	7046	793	426
60°	6707	538	349
65°	6218	386	278
70°	5672	305	238
75°	4919	271	183
80°	3906	196	196
85°	2152	261	130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7682 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	8.0
10°-20°	112.9	19.6
20°-30°	129.0	22.4
30°-40°	109.4	19.0
40°-50°	81.6	14.2
50°-60°	52.7	9.1
60°-70°	29.4	5.1
70°-80°	12.9	2.2
80°-90°	2.7	0.5
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°	287.9	49.9
0°-40°	397.3	68.9
0°-60°	531.6	92.2
0°-90°	576.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	576.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	495	501	493	488	490	47
15°	469	458	401	359	343	132
25°	420	371	264	194	173	194
35°	358	269	137	75	67	224
45°	287	170	56	36	31	221
55°	213	81	24	15	13	191
65°	139	30	9	7	6	138
75°	67	6	4	3	2	72
85°	10	1	1	1	1	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	503.1	503.1	503.1	503.1	503.1
2.5°	497.6	505.0	498.8	498.8	500.0
5°	495.1	501.3	493.3	488.3	490.2
7.5°	491.4	495.7	479.1	464.3	463.0
10°	485.9	487.7	457.5	434.7	428.5
12.5°	477.8	473.5	431.0	398.9	388.4
15°	469.2	457.5	401.4	358.8	342.8
17.5°	458.7	437.8	368.7	316.9	297.2
20°	447.0	417.4	334.8	273.1	251.6
22.5°	434.1	394.6	299.7	231.8	210.3
25°	420.5	371.2	264.5	193.6	173.3
27.5°	406.3	346.5	230.0	159.1	136.9
30°	389.7	321.2	197.3	125.8	105.4
32.5°	374.3	294.7	167.1	97.4	80.2
35°	357.6	269.4	136.9	74.6	66.6
37.5°	340.3	244.2	110.4	62.9	56.1
40°	323.1	218.9	86.3	53.0	46.9
42.5°	305.2	194.2	66.6	44.4	38.2
45°	286.7	170.2	56.1	36.4	30.8
47.5°	268.2	146.1	46.9	29.0	24.7
50°	249.7	123.3	38.8	22.8	19.7
52.5°	231.8	101.7	30.8	18.5	16.0
55°	213.3	80.8	24.0	14.8	12.9
57.5°	194.8	62.9	18.5	12.3	11.1
60°	177.0	47.5	14.2	9.9	9.2
62.5°	158.5	38.2	11.1	8.0	7.4
65°	138.7	29.6	8.6	6.8	6.2
67.5°	120.8	21.6	6.8	5.5	4.9
70°	102.4	14.8	5.5	4.9	4.3
72.5°	84.5	9.2	4.3	3.7	3.7
75°	67.2	6.2	3.7	3.1	2.5
77.5°	51.2	3.7	2.5	2.5	1.8
80°	35.8	2.5	1.8	1.8	1.8
82.5°	22.2	1.8	1.2	1.2	1.2
85°	9.9	0.6	1.2	0.6	0.6
87.5°	1.8	0.6	0.6	0.6	0.6
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	16.09	17.41	16.45	17.72	18.03	2.38	3.70	2.75	4.01	4.33
	3H	18.55	19.73	18.93	20.06	20.42	3.22	4.40	3.60	4.73	5.09
	4H	19.51	20.60	19.91	20.95	21.34	3.50	4.60	3.91	4.95	5.33
	6H	20.20	21.20	20.61	21.57	21.97	3.69	4.69	4.10	5.06	5.46
	8H	20.39	21.35	20.83	21.74	22.14	3.76	4.71	4.19	5.10	5.50
	12H	20.48	21.39	20.91	21.77	22.20	3.78	4.69	4.21	5.07	5.50
4H	2H	15.87	16.96	16.27	17.31	17.70	2.95	4.04	3.36	4.40	4.78
	3H	18.35	19.25	18.77	19.65	20.06	3.98	4.87	4.39	5.27	5.68
	4H	19.30	20.10	19.73	20.52	20.96	4.35	5.15	4.79	5.57	6.01
	6H	20.05	20.74	20.52	21.19	21.66	4.64	5.33	5.10	5.77	6.24
	8H	20.30	20.94	20.77	21.39	21.86	4.73	5.37	5.20	5.82	6.29
	12H	20.43	21.00	20.91	21.48	21.95	4.77	5.34	5.25	5.82	6.29
8H	4H	19.17	19.81	19.64	20.26	20.73	4.73	5.37	5.20	5.82	6.29
	6H	19.91	20.43	20.41	20.93	21.41	5.07	5.60	5.58	6.10	6.58
	8H	20.15	20.62	20.67	21.14	21.63	5.20	5.68	5.73	6.19	6.68
	12H	20.30	20.71	20.82	21.21	21.78	5.28	5.70	5.80	6.19	6.76
12H	4H	19.12	19.69	19.61	20.17	20.65	4.85	5.42	5.33	5.90	6.37
	6H	19.84	20.32	20.37	20.83	21.32	5.19	5.66	5.72	6.18	6.67
	8H	20.11	20.52	20.62	21.02	21.59	5.36	5.78	5.88	6.27	6.84