

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: P1055216

Luminaire Tested: S122R3DR-S485D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055216
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-S485D935-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

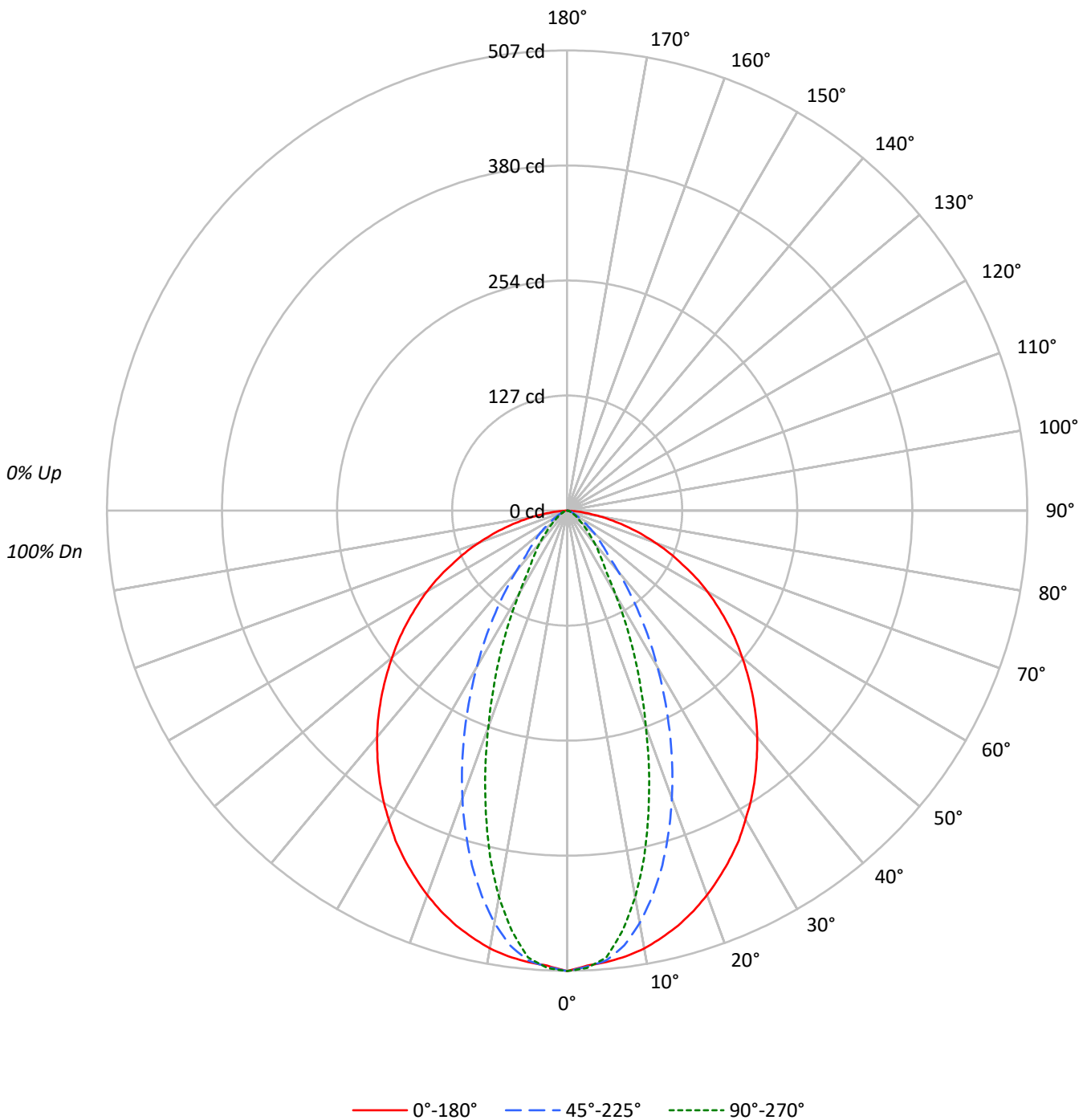
Lumens per Lamp: N/A
Luminaire Lumens: 581.4 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	9613	9613	9613
5°	9496	9460	9401
10°	9425	8875	8313
15°	9281	7940	6781
20°	9089	6807	5115
25°	8863	5575	3652
30°	8598	4353	2326
35°	8340	3192	1554
40°	8058	2152	1170
45°	7746	1517	833
50°	7422	1155	587
55°	7105	799	433
60°	6760	542	352
65°	6272	390	278
70°	5717	310	244
75°	4963	271	183
80°	3939	207	207
85°	2152	261	130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7746 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	8.0
10°-20°	113.9	19.6
20°-30°	130.1	22.4
30°-40°	110.3	19.0
40°-50°	82.3	14.2
50°-60°	53.2	9.1
60°-70°	29.6	5.1
70°-80°	13.0	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°	290.3	49.9
0°-40°	400.6	68.9
0°-60°	536.1	92.2
0°-90°	581.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	581.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	507	507	507	507	507	
5°	499	506	497	492	494	47
15°	473	461	405	362	346	133
25°	424	374	267	195	175	195
35°	361	272	138	75	67	225
45°	289	172	57	37	31	223
55°	215	82	24	15	13	192
65°	140	30	9	7	6	139
75°	68	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°	507.4	507.4	507.4	507.4	507.4
2.5°	501.8	509.2	503.0	503.0	504.3
5°	499.3	505.5	497.4	492.4	494.3
7.5°	495.5	499.9	483.1	468.2	466.9
10°	489.9	491.8	461.3	438.3	432.1
12.5°	481.9	477.5	434.6	402.3	391.7
15°	473.2	461.3	404.8	361.9	345.7
17.5°	462.6	441.5	371.8	319.6	299.7
20°	450.8	420.9	337.6	275.4	253.7
22.5°	437.7	397.9	302.2	233.8	212.0
25°	424.0	374.3	266.7	195.2	174.7
27.5°	409.7	349.4	231.9	160.4	138.0
30°	393.0	323.9	199.0	126.8	106.3
32.5°	377.4	297.2	168.5	98.2	80.8
35°	360.6	271.7	138.0	75.2	67.2
37.5°	343.2	246.2	111.3	63.4	56.6
40°	325.8	220.7	87.0	53.5	47.3
42.5°	307.8	195.9	67.2	44.8	38.5
45°	289.1	171.6	56.6	36.7	31.1
47.5°	270.5	147.4	47.3	29.2	24.9
50°	251.8	124.4	39.2	23.0	19.9
52.5°	233.8	102.6	31.1	18.7	16.2
55°	215.1	81.5	24.2	14.9	13.1
57.5°	196.5	63.4	18.7	12.4	11.2
60°	178.4	47.9	14.3	9.9	9.3
62.5°	159.8	38.5	11.2	8.1	7.5
65°	139.9	29.8	8.7	6.8	6.2
67.5°	121.9	21.8	6.8	5.6	5.0
70°	103.2	14.9	5.6	5.0	4.4
72.5°	85.2	9.3	4.4	3.7	3.7
75°	67.8	6.2	3.7	3.1	2.5
77.5°	51.6	3.7	2.5	2.5	1.9
80°	36.1	2.5	1.9	1.9	1.9
82.5°	22.4	1.9	1.2	1.2	1.2
85°	9.9	0.6	1.2	0.6	0.6
87.5°	1.9	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	16.11	17.43	16.48	17.75	18.06	2.41	3.73	2.77	4.04	4.36
	3H	18.58	19.76	18.96	20.09	20.45	3.27	4.44	3.65	4.77	5.14
	4H	19.54	20.63	19.94	20.98	21.37	3.54	4.64	3.95	4.99	5.37
	6H	20.23	21.23	20.64	21.60	22.00	3.74	4.75	4.16	5.12	5.51
	8H	20.42	21.37	20.85	21.77	22.17	3.82	4.77	4.25	5.16	5.56
	12H	20.51	21.41	20.94	21.80	22.23	3.84	4.74	4.27	5.13	5.56
4H	2H	15.90	16.99	16.30	17.34	17.72	2.98	4.07	3.39	4.43	4.81
	3H	18.38	19.28	18.80	19.68	20.09	4.03	4.92	4.44	5.33	5.73
	4H	19.33	20.13	19.76	20.55	20.99	4.39	5.19	4.83	5.61	6.05
	6H	20.08	20.77	20.55	21.22	21.69	4.70	5.39	5.16	5.83	6.30
	8H	20.33	20.97	20.80	21.42	21.89	4.79	5.43	5.26	5.88	6.35
	12H	20.45	21.02	20.94	21.51	21.98	4.83	5.40	5.31	5.88	6.35
8H	4H	19.19	19.84	19.66	20.29	20.76	4.76	5.41	5.23	5.86	6.33
	6H	19.93	20.46	20.44	20.95	21.44	5.14	5.66	5.64	6.16	6.64
	8H	20.18	20.65	20.70	21.16	21.66	5.27	5.74	5.79	6.25	6.75
	12H	20.33	20.74	20.84	21.24	21.81	5.34	5.76	5.86	6.25	6.82
12H	4H	19.15	19.72	19.64	20.20	20.68	4.89	5.45	5.37	5.94	6.41
	6H	19.87	20.34	20.39	20.86	21.35	5.25	5.73	5.78	6.24	6.73
	8H	20.14	20.55	20.65	21.05	21.62	5.42	5.84	5.94	6.33	6.90