

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: P1055210

Luminaire Tested: S122R3DR-S485D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055210
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-S485D927-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

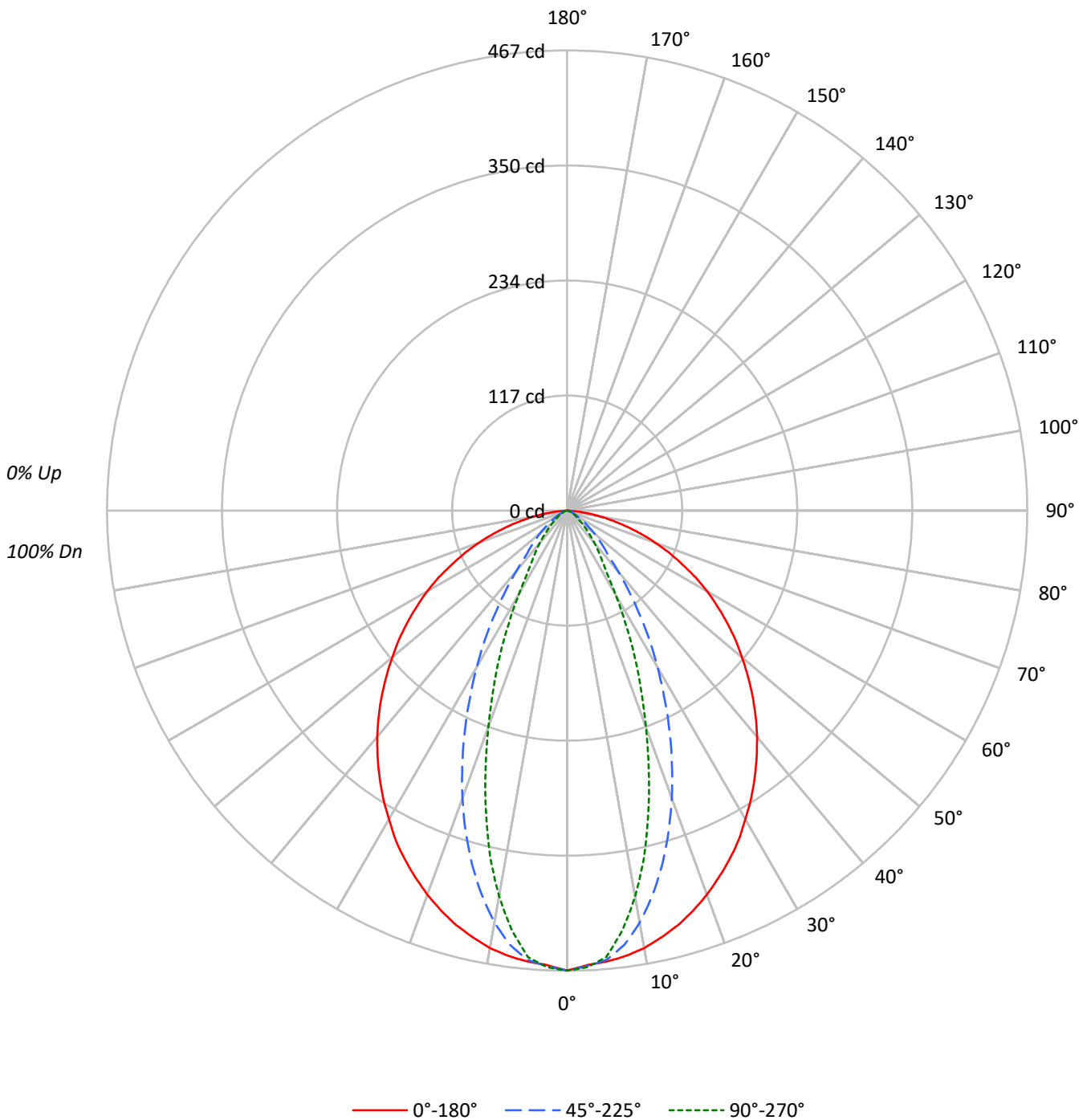
Lumens per Lamp: N/A
Luminaire Lumens: 535.0 lumens
Efficiency: N/A
Efficacy: 28.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71				71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58				58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53				53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49				49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45				45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8844	8844	8844
5°	8737	8705	8649
10°	8673	8167	7649
15°	8538	7304	6239
20°	8361	6262	4706
25°	8157	5130	3361
30°	7908	4006	2140
35°	7674	2937	1429
40°	7415	1981	1076
45°	7127	1396	766
50°	6829	1061	539
55°	6537	737	396
60°	6222	500	326
65°	5770	359	256
70°	5262	283	222
75°	4568	249	168
80°	3622	185	185
85°	2000	239	130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7127 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	8.0
10°-20°	104.8	19.6
20°-30°	119.7	22.4
30°-40°	101.5	19.0
40°-50°	75.7	14.2
50°-60°	48.9	9.1
60°-70°	27.3	5.1
70°-80°	12.0	2.2
80°-90°	2.5	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°	267.1	49.9
0°-40°	368.6	68.9
0°-60°	493.2	92.2
0°-90°	535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	535.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	459	465	458	453	455	44
15°	435	424	372	333	318	123
25°	390	344	245	180	161	180
35°	332	250	127	69	62	207
45°	266	158	52	34	29	205
55°	198	75	22	14	12	177
65°	129	28	8	6	6	128
75°	62	6	3	3	2	67
85°	9	1	1	1	1	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	466.8	466.8	466.8	466.8	466.8
2.5°	461.7	468.5	462.8	462.8	463.9
5°	459.4	465.1	457.7	453.1	454.8
7.5°	455.9	459.9	444.5	430.8	429.6
10°	450.8	452.5	424.5	403.3	397.6
12.5°	443.4	439.3	399.9	370.1	360.4
15°	435.3	424.5	372.4	332.9	318.1
17.5°	425.6	406.2	342.1	294.0	275.7
20°	414.7	387.3	310.6	253.4	233.4
22.5°	402.7	366.1	278.0	215.1	195.1
25°	390.2	344.4	245.4	179.6	160.8
27.5°	377.0	321.5	213.4	147.6	127.0
30°	361.5	298.0	183.1	116.7	97.8
32.5°	347.2	273.4	155.0	90.4	74.4
35°	331.8	250.0	127.0	69.2	61.8
37.5°	315.8	226.5	102.4	58.4	52.1
40°	299.8	203.1	80.1	49.2	43.5
42.5°	283.2	180.2	61.8	41.2	35.5
45°	266.0	157.9	52.1	33.8	28.6
47.5°	248.8	135.6	43.5	26.9	22.9
50°	231.7	114.4	36.0	21.2	18.3
52.5°	215.1	94.4	28.6	17.2	14.9
55°	197.9	74.9	22.3	13.7	12.0
57.5°	180.8	58.4	17.2	11.4	10.3
60°	164.2	44.0	13.2	9.2	8.6
62.5°	147.0	35.5	10.3	7.4	6.9
65°	128.7	27.5	8.0	6.3	5.7
67.5°	112.1	20.0	6.3	5.1	4.6
70°	95.0	13.7	5.1	4.6	4.0
72.5°	78.4	8.6	4.0	3.4	3.4
75°	62.4	5.7	3.4	2.9	2.3
77.5°	47.5	3.4	2.3	2.3	1.7
80°	33.2	2.3	1.7	1.7	1.7
82.5°	20.6	1.7	1.1	1.1	1.1
85°	9.2	0.6	1.1	0.6	0.6
87.5°	1.7	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	15.83	17.15	16.19	17.46	17.78	2.12	3.44	2.48	3.75	4.06
	3H	18.29	19.47	18.67	19.80	20.16	2.97	4.14	3.35	4.47	4.84
	4H	19.25	20.34	19.65	20.69	21.08	3.25	4.34	3.65	4.69	5.07
	6H	19.94	20.94	20.35	21.31	21.71	3.44	4.44	3.85	4.81	5.20
	8H	20.13	21.09	20.56	21.48	21.88	3.51	4.46	3.94	4.85	5.25
	12H	20.22	21.13	20.65	21.51	21.94	3.53	4.44	3.96	4.82	5.25
4H	2H	15.61	16.71	16.02	17.06	17.44	2.69	3.78	3.09	4.13	4.52
	3H	18.09	18.99	18.51	19.39	19.80	3.72	4.62	4.14	5.02	5.43
	4H	19.04	19.84	19.47	20.26	20.70	4.10	4.90	4.53	5.32	5.76
	6H	19.79	20.48	20.26	20.93	21.40	4.39	5.08	4.85	5.53	5.99
	8H	20.04	20.68	20.51	21.13	21.60	4.48	5.12	4.95	5.57	6.04
	12H	20.17	20.74	20.65	21.22	21.69	4.53	5.09	5.01	5.58	6.05
8H	4H	18.91	19.55	19.38	20.00	20.47	4.47	5.11	4.94	5.56	6.03
	6H	19.64	20.17	20.15	20.67	21.15	4.83	5.35	5.33	5.85	6.33
	8H	19.89	20.36	20.41	20.88	21.37	4.95	5.42	5.48	5.94	6.43
	12H	20.04	20.45	20.56	20.95	21.52	5.04	5.45	5.56	5.95	6.52
12H	4H	18.86	19.43	19.35	19.91	20.39	4.59	5.16	5.08	5.64	6.12
	6H	19.58	20.05	20.11	20.57	21.06	4.94	5.41	5.47	5.93	6.42
	8H	19.85	20.26	20.36	20.76	21.33	5.11	5.53	5.63	6.02	6.59