

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: P1055215

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055215
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-S485D935-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

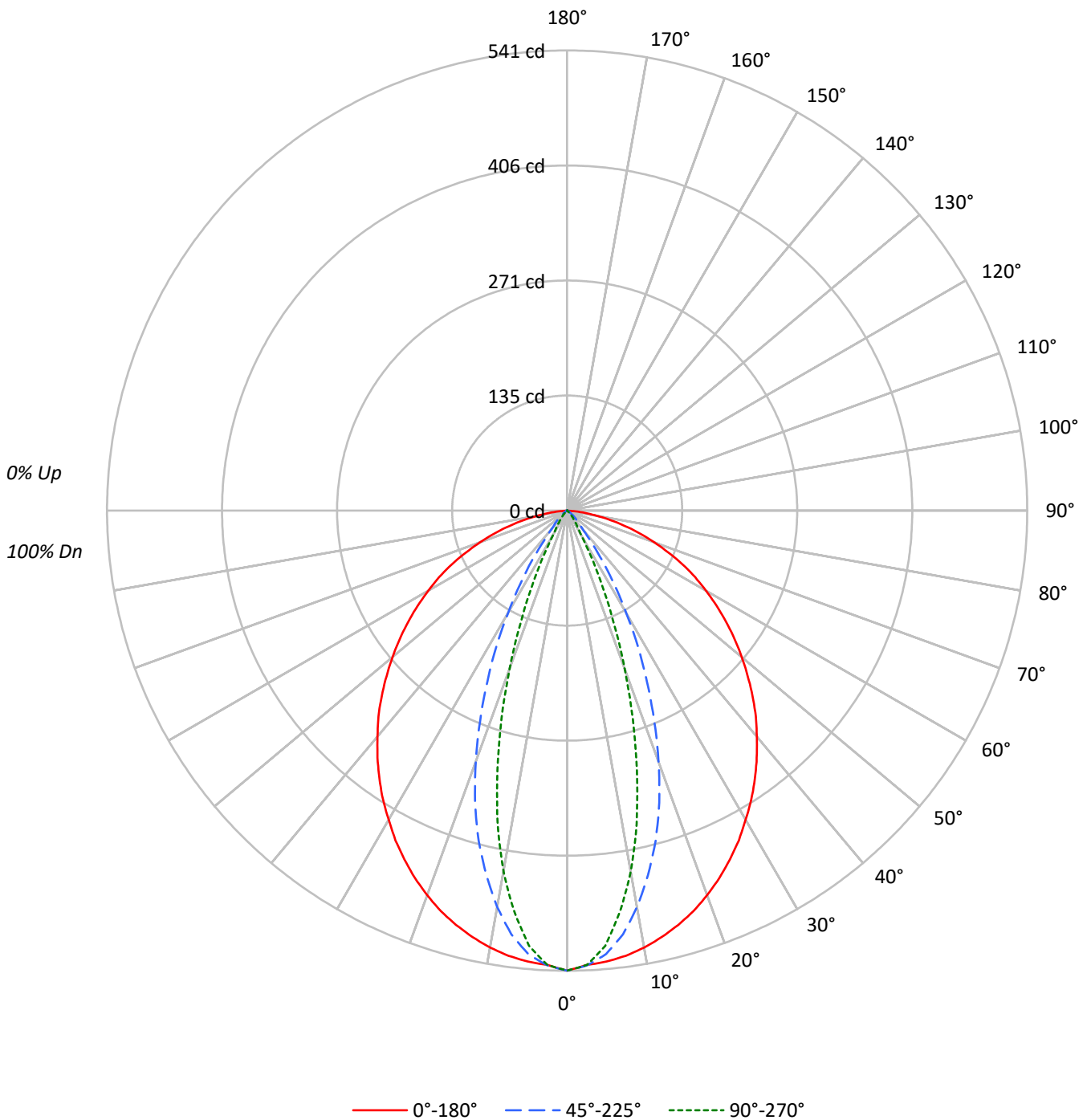
Lumens per Lamp: N/A
Luminaire Lumens: 492.1 lumens
Efficiency: N/A
Efficacy: 25.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	63	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	48	44	43				43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10248	10248	10248
5°	10121	9956	9768
10°	10037	9103	8290
15°	9891	7879	6208
20°	9702	6331	3974
25°	9461	4641	2040
30°	9182	3034	667
35°	8902	1681	389
40°	8580	678	215
45°	8263	450	83
50°	7899	256	35
55°	7538	122	20
60°	7139	45	0
65°	6715	27	0
70°	6027	33	0
75°	5190	44	0
80°	3939	0	0
85°	1630	130	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8263 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	9.9
10°-20°	112.7	22.9
20°-30°	114.4	23.2
30°-40°	85.8	17.4
40°-50°	60.1	12.2
50°-60°	36.8	7.5
60°-70°	21.9	4.4
70°-80°	10.1	2.1
80°-90°	1.8	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°	275.6	56.0
0°-40°	361.4	73.4
0°-60°	458.3	93.1
0°-90°	492.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	492.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	532	537	524	514	514	50
15°	504	477	402	340	316	142
25°	453	373	222	127	98	208
35°	385	251	73	22	17	241
45°	308	132	17	5	3	238
55°	228	40	4	1	1	204
65°	150	12	1	1	0	148
75°	71	1	1	1	0	75
85°	8	0	1	1	0	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	540.9	540.9	540.9	540.9	540.9
2.5°	534.7	542.8	535.3	534.1	534.7
5°	532.2	537.2	523.5	513.6	513.6
7.5°	527.9	527.9	502.4	481.9	475.7
10°	521.7	514.8	473.2	440.2	430.9
12.5°	513.6	497.4	439.0	392.3	377.4
15°	504.3	476.9	401.7	340.1	316.5
17.5°	493.7	453.9	360.0	283.5	256.2
20°	481.2	429.0	314.0	225.7	197.1
22.5°	467.6	401.7	267.4	174.1	143.6
25°	452.6	373.1	222.0	126.8	97.6
27.5°	437.1	343.2	180.3	87.0	59.7
30°	419.7	312.1	138.7	51.6	30.5
32.5°	402.9	282.3	103.8	28.0	22.4
35°	384.9	250.6	72.7	21.8	16.8
37.5°	366.2	220.7	44.8	16.2	12.4
40°	346.9	190.3	27.4	11.8	8.7
42.5°	328.3	161.7	21.8	8.1	5.6
45°	308.4	132.4	16.8	5.0	3.1
47.5°	287.9	105.7	12.4	3.1	1.9
50°	268.0	82.1	8.7	1.9	1.2
52.5°	248.1	60.3	5.6	1.2	0.6
55°	228.2	40.4	3.7	1.2	0.6
57.5°	208.3	28.6	2.5	0.6	0.6
60°	188.4	22.4	1.2	0.6	0.0
62.5°	169.7	17.4	1.2	0.6	0.6
65°	149.8	11.8	0.6	0.6	0.0
67.5°	128.7	7.5	0.6	0.6	0.0
70°	108.8	4.4	0.6	0.6	0.0
72.5°	89.5	2.5	0.6	0.6	0.0
75°	70.9	1.2	0.6	0.6	0.0
77.5°	52.9	0.6	0.0	0.6	0.0
80°	36.1	0.0	0.0	0.6	0.0
82.5°	21.1	0.0	0.0	0.6	0.0
85°	7.5	0.0	0.6	0.6	0.0
87.5°	0.0	0.0	0.6	0.6	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	14.30	15.56	14.66	15.87	16.18	0.00	0.00	0.00	0.00	0.00
	3H	18.04	19.16	18.42	19.49	19.85	0.00	0.00	0.00	0.00	0.00
	4H	19.35	20.39	19.75	20.74	21.13	0.00	0.00	0.00	0.00	0.00
	6H	20.21	21.16	20.62	21.53	21.93	0.00	0.00	0.00	0.00	0.00
	8H	20.42	21.32	20.85	21.71	22.12	0.00	0.00	0.00	0.00	0.00
	12H	20.48	21.35	20.92	21.73	22.16	0.00	0.00	0.00	0.00	0.00
4H	2H	14.05	15.09	14.45	15.44	15.83	0.00	0.00	0.00	0.00	0.00
	3H	17.79	18.65	18.21	19.05	19.45	0.00	0.00	0.00	0.00	0.00
	4H	19.09	19.85	19.52	20.27	20.71	0.00	0.00	0.00	0.00	0.00
	6H	20.01	20.66	20.47	21.11	21.58	0.00	0.00	0.00	0.00	0.00
	8H	20.27	20.88	20.74	21.33	21.80	0.00	0.00	0.00	0.00	0.00
	12H	20.37	20.91	20.86	21.39	21.87	0.00	0.00	0.00	0.00	0.00
8H	4H	18.94	19.56	19.41	20.00	20.47	0.00	0.00	0.00	0.00	0.00
	6H	19.85	20.34	20.35	20.84	21.32	0.00	0.00	0.00	0.00	0.00
	8H	20.10	20.55	20.63	21.06	21.56	0.00	0.00	0.00	0.00	0.00
	12H	20.22	20.61	20.74	21.11	21.68	0.00	0.00	0.00	0.00	0.00
12H	4H	18.89	19.43	19.38	19.92	20.39	0.00	0.00	0.00	0.00	0.00
	6H	19.78	20.23	20.31	20.74	21.24	0.00	0.00	0.00	0.00	0.00
	8H	20.06	20.45	20.58	20.94	21.52	0.00	0.00	0.00	0.00	0.00