

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055350

Luminaire Tested: S122R3DR-H485D935-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055350
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-H485D935-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

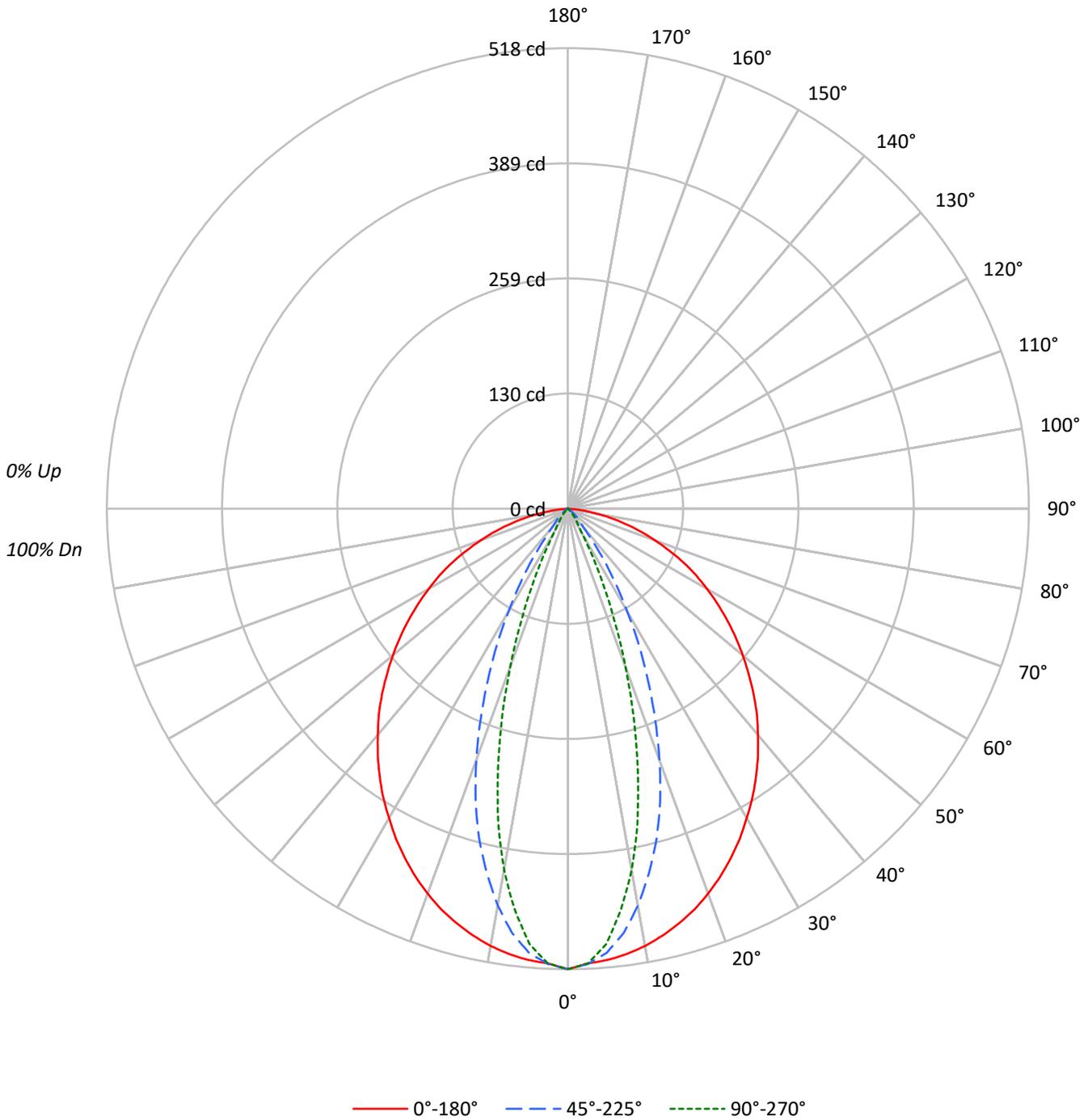
Lumens per Lamp: N/A
Luminaire Lumens: 471.2 lumens
Efficiency: N/A
Efficacy: 27.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (Ain): 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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9812	9812	9812
5°	9692	9534	9353
10°	9609	8717	7938
15°	9470	7544	5943
20°	9291	6061	3805
25°	9060	4442	1955
30°	8792	2905	639
35°	8523	1612	372
40°	8216	648	205
45°	7912	431	80
50°	7563	245	35
55°	7217	119	20
60°	6836	45	0
65°	6433	27	0
70°	5772	33	0
75°	4970	44	0
80°	3764	0	0
85°	1543	130	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7912 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	9.9
10°-20°	107.9	22.9
20°-30°	109.5	23.2
30°-40°	82.2	17.4
40°-50°	57.6	12.2
50°-60°	35.2	7.5
60°-70°	21.0	4.5
70°-80°	9.7	2.1
80°-90°	1.7	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°	263.9	56.0
0°-40°	346.0	73.4
0°-60°	438.8	93.1
0°-90°	471.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	471.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	510	514	501	492	492	48
15°	483	457	385	326	303	136
25°	433	357	212	121	94	200
35°	368	240	70	21	16	230
45°	295	127	16	5	3	228
55°	218	39	4	1	1	195
65°	144	11	1	1	0	141
75°	68	1	1	1	0	72
85°	7	0	1	1	0	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	517.9	517.9	517.9	517.9	517.9
2.5°	512.0	519.7	512.6	511.4	512.0
5°	509.6	514.4	501.3	491.8	491.8
7.5°	505.4	505.4	481.0	461.4	455.4
10°	499.5	492.9	453.1	421.5	412.6
12.5°	491.8	476.3	420.3	375.7	361.4
15°	482.8	456.6	384.6	325.7	303.0
17.5°	472.7	434.6	344.7	271.5	245.3
20°	460.8	410.8	300.6	216.1	188.7
22.5°	447.7	384.6	256.0	166.7	137.5
25°	433.4	357.2	212.5	121.4	93.5
27.5°	418.5	328.6	172.6	83.3	57.2
30°	401.9	298.9	132.8	49.4	29.2
32.5°	385.8	270.3	99.4	26.8	21.4
35°	368.5	239.9	69.7	20.8	16.1
37.5°	350.7	211.3	42.9	15.5	11.9
40°	332.2	182.2	26.2	11.3	8.3
42.5°	314.3	154.8	20.8	7.7	5.4
45°	295.3	126.8	16.1	4.8	3.0
47.5°	275.6	101.2	11.9	3.0	1.8
50°	256.6	78.6	8.3	1.8	1.2
52.5°	237.5	57.7	5.4	1.2	0.6
55°	218.5	38.7	3.6	1.2	0.6
57.5°	199.4	27.4	2.4	0.6	0.6
60°	180.4	21.4	1.2	0.6	0.0
62.5°	162.5	16.7	1.2	0.6	0.6
65°	143.5	11.3	0.6	0.6	0.0
67.5°	123.2	7.1	0.6	0.6	0.0
70°	104.2	4.2	0.6	0.6	0.0
72.5°	85.7	2.4	0.6	0.6	0.0
75°	67.9	1.2	0.6	0.6	0.0
77.5°	50.6	0.6	0.0	0.6	0.0
80°	34.5	0.0	0.0	0.6	0.0
82.5°	20.2	0.0	0.0	0.6	0.0
85°	7.1	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	14.15	15.41	14.51	15.72	16.03	0.00	0.00	0.00	0.00	0.00
	3H	17.89	19.00	18.27	19.33	19.70	0.00	0.00	0.00	0.00	0.00
	4H	19.20	20.24	19.60	20.59	20.97	0.00	0.00	0.00	0.00	0.00
	6H	20.05	21.01	20.47	21.38	21.77	0.00	0.00	0.00	0.00	0.00
	8H	20.27	21.17	20.70	21.56	21.97	0.00	0.00	0.00	0.00	0.00
	12H	20.33	21.19	20.76	21.58	22.01	0.00	0.00	0.00	0.00	0.00
4H	2H	13.90	14.94	14.30	15.29	15.68	0.00	0.00	0.00	0.00	0.00
	3H	17.64	18.49	18.05	18.90	19.30	0.00	0.00	0.00	0.00	0.00
	4H	18.94	19.70	19.37	20.12	20.56	0.00	0.00	0.00	0.00	0.00
	6H	19.85	20.51	20.32	20.96	21.43	0.00	0.00	0.00	0.00	0.00
	8H	20.11	20.72	20.58	21.17	21.64	0.00	0.00	0.00	0.00	0.00
	12H	20.21	20.75	20.70	21.24	21.71	0.00	0.00	0.00	0.00	0.00
8H	4H	18.79	19.40	19.26	19.85	20.32	0.00	0.00	0.00	0.00	0.00
	6H	19.69	20.19	20.20	20.69	21.17	0.00	0.00	0.00	0.00	0.00
	8H	19.95	20.39	20.47	20.91	21.40	0.00	0.00	0.00	0.00	0.00
	12H	20.07	20.45	20.58	20.95	21.52	0.00	0.00	0.00	0.00	0.00
12H	4H	18.74	19.28	19.23	19.77	20.24	0.00	0.00	0.00	0.00	0.00
	6H	19.63	20.07	20.15	20.59	21.08	0.00	0.00	0.00	0.00	0.00
	8H	19.90	20.29	20.42	20.79	21.36	0.00	0.00	0.00	0.00	0.00