

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: P1055353

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055353
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-H485D940-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

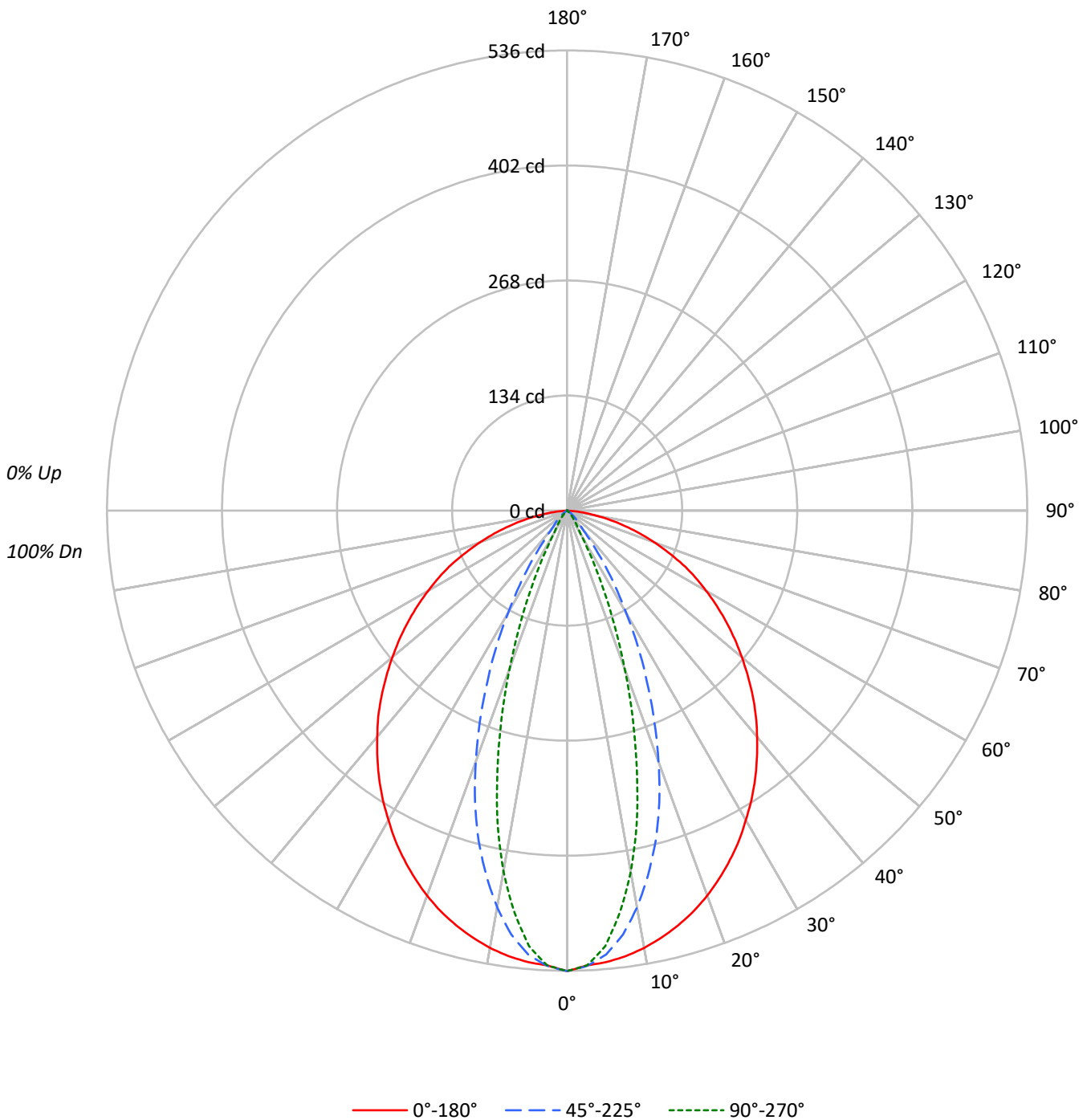
Lumens per Lamp: N/A
Luminaire Lumens: 488.0 lumens
Efficiency: N/A
Efficacy: 28.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1055353

CATALOG NUMBER: S122R3DR-H485D940-X4F0-XX-UDD-F-B

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	63	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	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10163	10163	10163
5°	10038	9874	9686
10°	9952	9027	8220
15°	9807	7812	6155
20°	9621	6278	3942
25°	9384	4601	2024
30°	9105	3008	661
35°	8828	1668	384
40°	8510	670	213
45°	8193	445	83
50°	7831	253	35
55°	7475	122	20
60°	7078	45	0
65°	6662	27	0
70°	5977	33	0
75°	5146	44	0
80°	3906	0	0
85°	1609	130	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8193 cd/sqm



TEST NUMBER: P1055353

CATALOG NUMBER: S122R3DR-H485D940-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	9.9
10°-20°	111.7	22.9
20°-30°	113.4	23.2
30°-40°	85.1	17.4
40°-50°	59.6	12.2
50°-60°	36.5	7.5
60°-70°	21.7	4.5
70°-80°	10.0	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°	273.3	56.0
0°-40°	358.4	73.4
0°-60°	454.5	93.1
0°-90°	488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	536	536	536	536	536	
5°	528	533	519	509	509	50
15°	500	473	398	337	314	141
25°	449	370	220	126	97	207
35°	382	248	72	22	17	239
45°	306	131	17	5	3	236
55°	226	40	4	1	1	202
65°	149	12	1	1	0	146
75°	70	1	1	1	0	75
85°	7	0	1	1	0	13
90°	0	0	0	0	0	



TEST NUMBER: P1055353

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	536.4	536.4	536.4	536.4	536.4
2.5°	530.3	538.3	530.9	529.6	530.3
5°	527.8	532.7	519.2	509.3	509.3
7.5°	523.5	523.5	498.2	477.8	471.7
10°	517.3	510.5	469.2	436.5	427.3
12.5°	509.3	493.3	435.3	389.1	374.3
15°	500.0	472.9	398.3	337.3	313.8
17.5°	489.6	450.1	357.0	281.2	254.0
20°	477.2	425.4	311.4	223.8	195.5
22.5°	463.7	398.3	265.1	172.6	142.4
25°	448.9	369.9	220.1	125.8	96.8
27.5°	433.5	340.4	178.8	86.3	59.2
30°	416.2	309.5	137.5	51.2	30.2
32.5°	399.5	279.9	103.0	27.7	22.2
35°	381.7	248.5	72.1	21.6	16.6
37.5°	363.2	218.9	44.4	16.0	12.3
40°	344.1	188.7	27.1	11.7	8.6
42.5°	325.6	160.3	21.6	8.0	5.5
45°	305.8	131.3	16.6	4.9	3.1
47.5°	285.5	104.8	12.3	3.1	1.8
50°	265.7	81.4	8.6	1.8	1.2
52.5°	246.0	59.8	5.5	1.2	0.6
55°	226.3	40.1	3.7	1.2	0.6
57.5°	206.6	28.4	2.5	0.6	0.6
60°	186.8	22.2	1.2	0.6	0.0
62.5°	168.3	17.3	1.2	0.6	0.6
65°	148.6	11.7	0.6	0.6	0.0
67.5°	127.6	7.4	0.6	0.6	0.0
70°	107.9	4.3	0.6	0.6	0.0
72.5°	88.8	2.5	0.6	0.6	0.0
75°	70.3	1.2	0.6	0.6	0.0
77.5°	52.4	0.6	0.0	0.6	0.0
80°	35.8	0.0	0.0	0.6	0.0
82.5°	21.0	0.0	0.0	0.6	0.0
85°	7.4	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	14.27	15.53	14.64	15.84	16.16	0.00	0.00	0.00	0.00	0.00
	3H	18.01	19.13	18.39	19.46	19.82	0.00	0.00	0.00	0.00	0.00
	4H	19.32	20.36	19.72	20.71	21.10	0.00	0.00	0.00	0.00	0.00
	6H	20.18	21.13	20.59	21.50	21.90	0.00	0.00	0.00	0.00	0.00
	8H	20.39	21.29	20.82	21.68	22.09	0.00	0.00	0.00	0.00	0.00
	12H	20.45	21.32	20.89	21.70	22.13	0.00	0.00	0.00	0.00	0.00
4H	2H	14.03	15.07	14.43	15.42	15.80	0.00	0.00	0.00	0.00	0.00
	3H	17.76	18.62	18.18	19.02	19.42	0.00	0.00	0.00	0.00	0.00
	4H	19.06	19.82	19.49	20.24	20.69	0.00	0.00	0.00	0.00	0.00
	6H	19.98	20.63	20.44	21.08	21.55	0.00	0.00	0.00	0.00	0.00
	8H	20.24	20.85	20.71	21.30	21.77	0.00	0.00	0.00	0.00	0.00
	12H	20.34	20.88	20.83	21.36	21.84	0.00	0.00	0.00	0.00	0.00
8H	4H	18.91	19.53	19.38	19.97	20.45	0.00	0.00	0.00	0.00	0.00
	6H	19.82	20.31	20.32	20.81	21.29	0.00	0.00	0.00	0.00	0.00
	8H	20.07	20.52	20.60	21.03	21.53	0.00	0.00	0.00	0.00	0.00
	12H	20.19	20.58	20.71	21.08	21.65	0.00	0.00	0.00	0.00	0.00
12H	4H	18.87	19.40	19.35	19.89	20.36	0.00	0.00	0.00	0.00	0.00
	6H	19.75	20.20	20.28	20.71	21.21	0.00	0.00	0.00	0.00	0.00
	8H	20.03	20.42	20.55	20.91	21.49	0.00	0.00	0.00	0.00	0.00