

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: P1055374

Luminaire Tested: S122R3DR-H675D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055374
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-H675D930-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

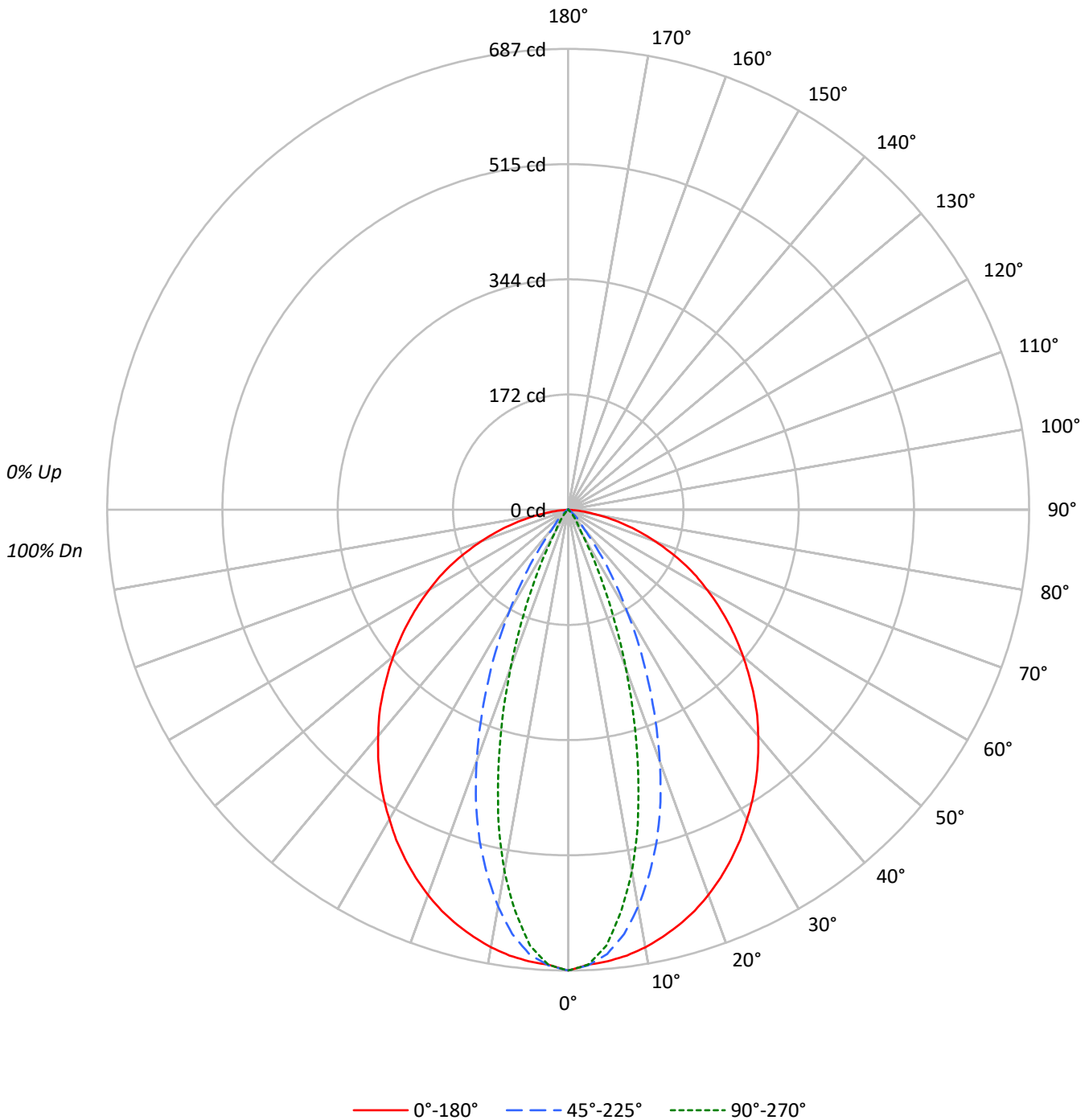
Lumens per Lamp: N/A
Luminaire Lumens: 624.9 lumens
Efficiency: N/A
Efficacy: 26.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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°	13014	13014	13014
5°	12853	12643	12402
10°	12743	11558	10525
15°	12559	10003	7883
20°	12321	8038	5046
25°	12016	5893	2592
30°	11658	3853	847
35°	11303	2137	493
40°	10894	858	275
45°	10492	571	104
50°	10030	327	47
55°	9572	155	26
60°	9064	61	0
65°	8531	36	0
70°	7655	44	0
75°	6588	59	0
80°	4997	0	0
85°	2065	174	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	9.9
10°-20°	143.1	22.9
20°-30°	145.3	23.2
30°-40°	109.0	17.4
40°-50°	76.3	12.2
50°-60°	46.7	7.5
60°-70°	27.8	4.5
70°-80°	12.8	2.1
80°-90°	2.3	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°	349.9	56.0
0°-40°	458.9	73.4
0°-60°	582.0	93.1
0°-90°	624.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	624.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	687	687	687	687	687	
5°	676	682	665	652	652	64
15°	640	606	510	432	402	180
25°	575	474	282	161	124	265
35°	489	318	92	28	21	305
45°	392	168	21	6	4	302
55°	290	51	5	2	1	259
65°	190	15	1	1	0	187
75°	90	2	1	1	0	96
85°	10	0	1	1	0	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.9	686.9	686.9	686.9	686.9
2.5°	679.0	689.2	679.8	678.2	679.0
5°	675.8	682.1	664.8	652.1	652.1
7.5°	670.3	670.3	637.9	611.9	604.0
10°	662.4	653.7	600.8	559.0	547.1
12.5°	652.1	631.6	557.4	498.2	479.2
15°	640.3	605.6	510.0	431.9	401.9
17.5°	626.9	576.3	457.1	360.0	325.3
20°	611.1	544.8	398.7	286.6	250.3
22.5°	593.7	510.0	339.5	221.1	182.4
25°	574.8	473.7	281.9	161.1	124.0
27.5°	555.0	435.8	229.0	110.5	75.8
30°	532.9	396.3	176.1	65.5	38.7
32.5°	511.6	358.4	131.8	35.5	28.4
35°	488.7	318.2	92.4	27.6	21.3
37.5°	465.0	280.3	56.8	20.5	15.8
40°	440.5	241.6	34.7	15.0	11.1
42.5°	416.9	205.3	27.6	10.3	7.1
45°	391.6	168.2	21.3	6.3	3.9
47.5°	365.5	134.2	15.8	3.9	2.4
50°	340.3	104.2	11.1	2.4	1.6
52.5°	315.0	76.6	7.1	1.6	0.8
55°	289.8	51.3	4.7	1.6	0.8
57.5°	264.5	36.3	3.2	0.8	0.8
60°	239.2	28.4	1.6	0.8	0.0
62.5°	215.5	22.1	1.6	0.8	0.8
65°	190.3	15.0	0.8	0.8	0.0
67.5°	163.4	9.5	0.8	0.8	0.0
70°	138.2	5.5	0.8	0.8	0.0
72.5°	113.7	3.2	0.8	0.8	0.0
75°	90.0	1.6	0.8	0.8	0.0
77.5°	67.1	0.8	0.0	0.8	0.0
80°	45.8	0.0	0.0	0.8	0.0
82.5°	26.8	0.0	0.0	0.8	0.0
85°	9.5	0.0	0.8	0.8	0.0
87.5°	0.0	0.0	0.8	0.8	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	15.13	16.39	15.49	16.70	17.01	0.00	0.00	0.00	0.00	0.00
	3H	18.87	19.99	19.25	20.32	20.68	0.00	0.00	0.00	0.00	0.00
	4H	20.18	21.22	20.58	21.57	21.96	0.00	0.00	0.00	0.00	0.00
	6H	21.03	21.99	21.45	22.36	22.75	0.00	0.00	0.00	0.00	0.00
	8H	21.25	22.15	21.68	22.54	22.95	0.00	0.00	0.00	0.00	0.00
	12H	21.31	22.17	21.74	22.56	22.99	0.00	0.00	0.00	0.00	0.00
4H	2H	14.88	15.92	15.28	16.27	16.66	0.00	0.00	0.00	0.00	0.00
	3H	18.62	19.47	19.03	19.88	20.28	0.00	0.00	0.00	0.00	0.00
	4H	19.92	20.68	20.35	21.10	21.54	0.00	0.00	0.00	0.00	0.00
	6H	20.84	21.49	21.30	21.94	22.41	0.00	0.00	0.00	0.00	0.00
	8H	21.09	21.71	21.56	22.15	22.63	0.00	0.00	0.00	0.00	0.00
	12H	21.20	21.73	21.68	22.22	22.69	0.00	0.00	0.00	0.00	0.00
8H	4H	19.77	20.38	20.24	20.83	21.30	0.00	0.00	0.00	0.00	0.00
	6H	20.67	21.17	21.18	21.67	22.15	0.00	0.00	0.00	0.00	0.00
	8H	20.93	21.37	21.45	21.89	22.38	0.00	0.00	0.00	0.00	0.00
	12H	21.05	21.44	21.56	21.93	22.51	0.00	0.00	0.00	0.00	0.00
12H	4H	19.72	20.26	20.21	20.75	21.22	0.00	0.00	0.00	0.00	0.00
	6H	20.61	21.05	21.13	21.57	22.06	0.00	0.00	0.00	0.00	0.00
	8H	20.89	21.28	21.40	21.77	22.34	0.00	0.00	0.00	0.00	0.00