

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: P1055375

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055375
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-H675D930-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

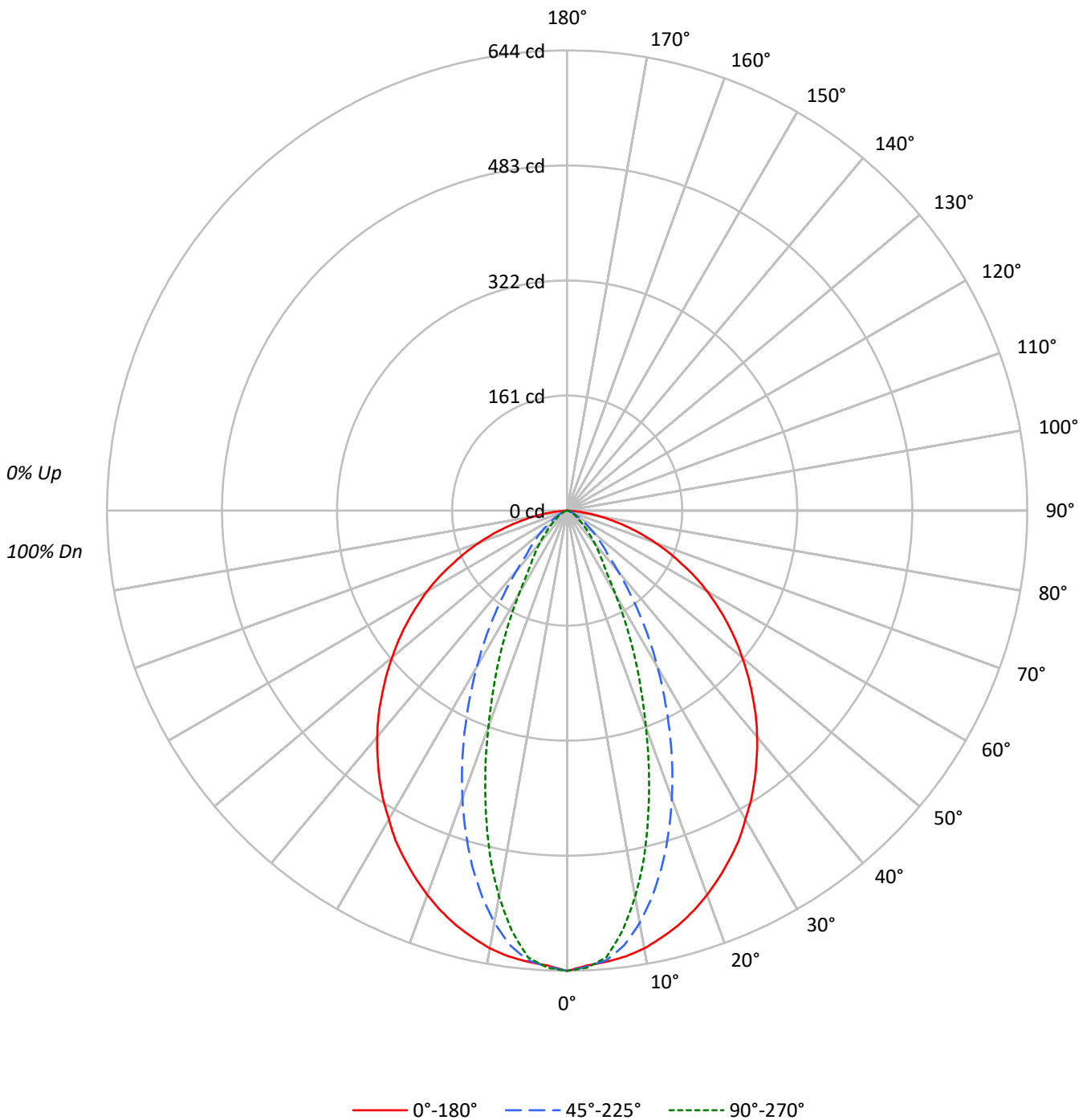
Lumens per Lamp: N/A
Luminaire Lumens: 738.3 lumens
Efficiency: N/A
Efficacy: 31.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12205	12205	12205
5°	12058	12012	11938
10°	11968	11270	10556
15°	11784	10082	8611
20°	11541	8643	6494
25°	11255	7080	4639
30°	10917	5526	2953
35°	10591	4054	1973
40°	10232	2733	1484
45°	9836	1924	1058
50°	9426	1465	746
55°	9024	1017	548
60°	8586	690	447
65°	7962	498	354
70°	7262	393	305
75°	6303	344	234
80°	4997	262	262
85°	2739	348	174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	8.0
10°-20°	144.6	19.6
20°-30°	165.2	22.4
30°-40°	140.0	19.0
40°-50°	104.5	14.2
50°-60°	67.5	9.1
60°-70°	37.6	5.1
70°-80°	16.5	2.2
80°-90°	3.4	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°	368.6	49.9
0°-40°	508.7	68.9
0°-60°	680.7	92.2
0°-90°	738.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	738.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	644	644	644	644	644	
5°	634	642	632	625	628	60
15°	601	586	514	460	439	169
25°	538	475	339	248	222	248
35°	458	345	175	96	85	286
45°	367	218	72	47	40	283
55°	273	103	31	19	17	244
65°	178	38	11	9	8	177
75°	86	8	5	4	3	92
85°	13	1	2	1	1	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	644.2	644.2	644.2	644.2	644.2
2.5°	637.1	646.6	638.7	638.7	640.3
5°	634.0	641.9	631.6	625.3	627.7
7.5°	629.2	634.8	613.4	594.5	592.9
10°	622.1	624.5	585.8	556.6	548.7
12.5°	611.9	606.3	551.9	510.8	497.4
15°	600.8	585.8	514.0	459.5	439.0
17.5°	587.4	560.6	472.1	405.8	380.5
20°	572.4	534.5	428.7	349.8	322.1
22.5°	555.8	505.3	383.7	296.9	269.2
25°	538.4	475.3	338.7	247.9	221.9
27.5°	520.3	443.7	294.5	203.7	175.3
30°	499.0	411.3	252.6	161.1	135.0
32.5°	479.2	377.4	214.0	124.7	102.6
35°	457.9	345.0	175.3	95.5	85.3
37.5°	435.8	312.6	141.3	80.5	71.8
40°	413.7	280.3	110.5	67.9	60.0
42.5°	390.8	248.7	85.3	56.8	48.9
45°	367.1	217.9	71.8	46.6	39.5
47.5°	343.4	187.1	60.0	37.1	31.6
50°	319.8	157.9	49.7	29.2	25.3
52.5°	296.9	130.3	39.5	23.7	20.5
55°	273.2	103.4	30.8	18.9	16.6
57.5°	249.5	80.5	23.7	15.8	14.2
60°	226.6	60.8	18.2	12.6	11.8
62.5°	202.9	48.9	14.2	10.3	9.5
65°	177.6	37.9	11.1	8.7	7.9
67.5°	154.7	27.6	8.7	7.1	6.3
70°	131.1	18.9	7.1	6.3	5.5
72.5°	108.2	11.8	5.5	4.7	4.7
75°	86.1	7.9	4.7	3.9	3.2
77.5°	65.5	4.7	3.2	3.2	2.4
80°	45.8	3.2	2.4	2.4	2.4
82.5°	28.4	2.4	1.6	1.6	1.6
85°	12.6	0.8	1.6	0.8	0.8
87.5°	2.4	0.8	0.8	0.8	0.8
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	16.94	18.26	17.31	18.57	18.89	3.26	4.58	3.62	4.89	5.20
	3H	19.41	20.58	19.79	20.91	21.28	4.10	5.27	4.48	5.60	5.97
	4H	20.37	21.46	20.77	21.81	22.19	4.37	5.47	4.78	5.82	6.20
	6H	21.06	22.06	21.47	22.43	22.82	4.57	5.58	4.99	5.95	6.34
	8H	21.25	22.20	21.68	22.59	23.00	4.65	5.60	5.08	5.99	6.40
	12H	21.33	22.24	21.77	22.62	23.05	4.68	5.59	5.11	5.97	6.40
4H	2H	16.73	17.82	17.13	18.17	18.55	3.83	4.92	4.24	5.28	5.66
	3H	19.21	20.11	19.62	20.51	20.91	4.86	5.75	5.27	6.16	6.56
	4H	20.16	20.96	20.59	21.38	21.82	5.22	6.02	5.65	6.44	6.88
	6H	20.91	21.60	21.37	22.05	22.51	5.52	6.21	5.99	6.66	7.13
	8H	21.15	21.80	21.62	22.25	22.72	5.63	6.27	6.09	6.72	7.19
	12H	21.28	21.85	21.77	22.33	22.81	5.67	6.24	6.16	6.72	7.20
8H	4H	20.02	20.67	20.49	21.11	21.59	5.59	6.24	6.06	6.68	7.15
	6H	20.76	21.29	21.26	21.78	22.26	5.96	6.49	6.47	6.99	7.47
	8H	21.01	21.48	21.53	21.99	22.48	6.11	6.58	6.63	7.09	7.59
	12H	21.16	21.57	21.67	22.07	22.64	6.19	6.61	6.71	7.10	7.68
12H	4H	19.98	20.55	20.46	21.03	21.50	5.71	6.28	6.20	6.77	7.24
	6H	20.70	21.17	21.22	21.69	22.18	6.08	6.56	6.61	7.07	7.56
	8H	20.97	21.38	21.48	21.87	22.45	6.27	6.68	6.78	7.18	7.75