

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: P1055384

Luminaire Tested: S122R3DR-H675D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055384
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-H675D950-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

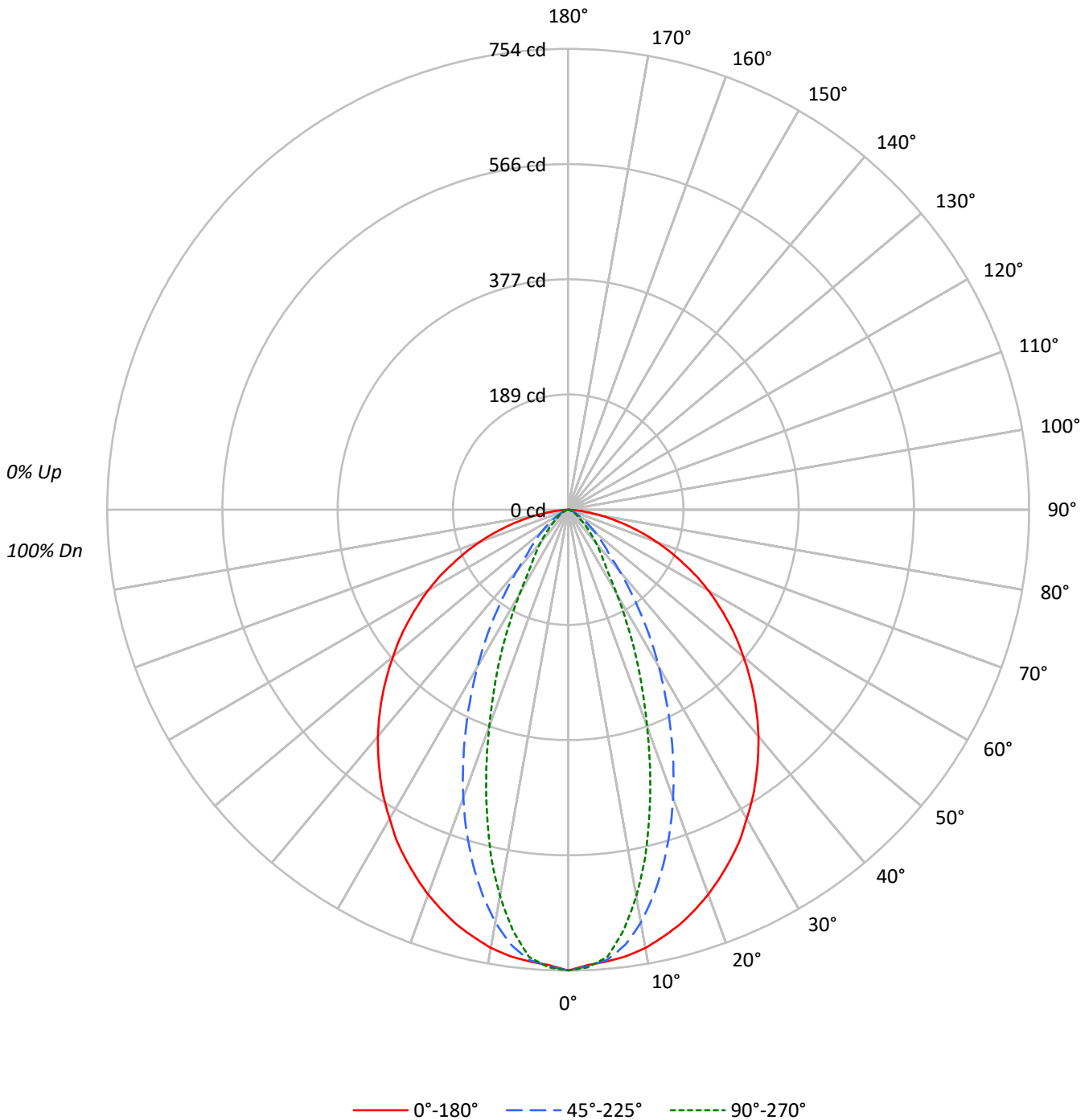
Lumens per Lamp: N/A
Luminaire Lumens: 863.9 lumens
Efficiency: N/A
Efficacy: 36.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	14281	14281	14281
5°	14108	14056	13967
10°	14005	13188	12353
15°	13789	11796	10074
20°	13504	10113	7599
25°	13170	8284	5427
30°	12774	6467	3457
35°	12392	4744	2308
40°	11973	3198	1736
45°	11510	2253	1238
50°	11026	1715	872
55°	10557	1189	641
60°	10045	803	527
65°	9320	578	412
70°	8497	460	360
75°	7371	403	271
80°	5848	305	305
85°	3217	391	196

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11510 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	8.0
10°-20°	169.2	19.6
20°-30°	193.2	22.4
30°-40°	163.9	19.0
40°-50°	122.3	14.2
50°-60°	79.0	9.1
60°-70°	44.1	5.1
70°-80°	19.3	2.2
80°-90°	4.0	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°	431.3	49.9
0°-40°	595.2	68.9
0°-60°	796.5	92.2
0°-90°	863.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	863.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	754	754	754	754	754	
5°	742	751	739	732	734	70
15°	703	686	601	538	514	198
25°	630	556	396	290	260	290
35°	536	404	205	112	100	335
45°	430	255	84	54	46	331
55°	320	121	36	22	19	286
65°	208	44	13	10	9	207
75°	101	9	6	5	4	107
85°	15	1	2	1	1	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	753.8	753.8	753.8	753.8	753.8
2.5°	745.5	756.6	747.4	747.4	749.2
5°	741.8	751.1	739.1	731.7	734.4
7.5°	736.3	742.8	717.8	695.6	693.8
10°	728.0	730.7	685.5	651.3	642.1
12.5°	716.0	709.5	645.8	597.7	582.0
15°	703.0	685.5	601.4	537.7	513.6
17.5°	687.3	655.9	552.4	474.8	445.3
20°	669.8	625.4	501.6	409.3	376.9
22.5°	650.4	591.2	449.0	347.4	315.0
25°	630.0	556.1	396.3	290.1	259.6
27.5°	608.8	519.2	344.6	238.3	205.1
30°	583.9	481.3	295.6	188.5	158.0
32.5°	560.8	441.6	250.4	146.0	120.1
35°	535.8	403.7	205.1	111.8	99.8
37.5°	510.0	365.8	165.4	94.2	84.1
40°	484.1	328.0	129.3	79.4	70.2
42.5°	457.3	291.0	99.8	66.5	57.3
45°	429.6	255.0	84.1	54.5	46.2
47.5°	401.9	218.9	70.2	43.4	37.0
50°	374.1	184.8	58.2	34.2	29.6
52.5°	347.4	152.4	46.2	27.7	24.0
55°	319.6	121.0	36.0	22.2	19.4
57.5°	291.9	94.2	27.7	18.5	16.6
60°	265.1	71.1	21.2	14.8	13.9
62.5°	237.4	57.3	16.6	12.0	11.1
65°	207.9	44.3	12.9	10.2	9.2
67.5°	181.1	32.3	10.2	8.3	7.4
70°	153.4	22.2	8.3	7.4	6.5
72.5°	126.6	13.9	6.5	5.5	5.5
75°	100.7	9.2	5.5	4.6	3.7
77.5°	76.7	5.5	3.7	3.7	2.8
80°	53.6	3.7	2.8	2.8	2.8
82.5°	33.3	2.8	1.8	1.8	1.8
85°	14.8	0.9	1.8	0.9	0.9
87.5°	2.8	0.9	0.9	0.9	0.9
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	17.49	18.81	17.85	19.12	19.44	3.81	5.13	4.17	5.44	5.75
	3H	19.96	21.13	20.34	21.46	21.83	4.66	5.83	5.04	6.16	6.52
	4H	20.92	22.01	21.32	22.36	22.74	4.93	6.02	5.33	6.37	6.75
	6H	21.60	22.61	22.02	22.98	23.37	5.12	6.13	5.54	6.50	6.89
	8H	21.80	22.75	22.23	23.14	23.55	5.20	6.15	5.63	6.54	6.94
	12H	21.88	22.79	22.31	23.17	23.60	5.22	6.12	5.65	6.51	6.94
4H	2H	17.27	18.37	17.68	18.72	19.10	4.37	5.47	4.78	5.82	6.20
	3H	19.76	20.65	20.17	21.06	21.46	5.41	6.30	5.82	6.70	7.11
	4H	20.70	21.50	21.14	21.92	22.36	5.77	6.57	6.20	6.99	7.43
	6H	21.46	22.15	21.92	22.59	23.06	6.07	6.76	6.53	7.20	7.67
	8H	21.70	22.35	22.17	22.79	23.26	6.16	6.81	6.63	7.25	7.72
	12H	21.83	22.40	22.32	22.88	23.36	6.20	6.77	6.69	7.25	7.73
8H	4H	20.57	21.21	21.04	21.66	22.13	6.14	6.79	6.61	7.23	7.70
	6H	21.31	21.83	21.81	22.33	22.81	6.51	7.03	7.01	7.53	8.01
	8H	21.55	22.02	22.08	22.54	23.03	6.64	7.11	7.16	7.63	8.12
	12H	21.70	22.12	22.22	22.61	23.18	6.72	7.13	7.23	7.63	8.20
12H	4H	20.52	21.09	21.01	21.58	22.05	6.26	6.83	6.75	7.31	7.79
	6H	21.25	21.72	21.77	22.23	22.73	6.63	7.10	7.15	7.61	8.10
	8H	21.51	21.93	22.03	22.42	22.99	6.80	7.21	7.31	7.71	8.28