

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: P1055366

Luminaire Tested: S122R3DR-H675D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055366
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-H675D840-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

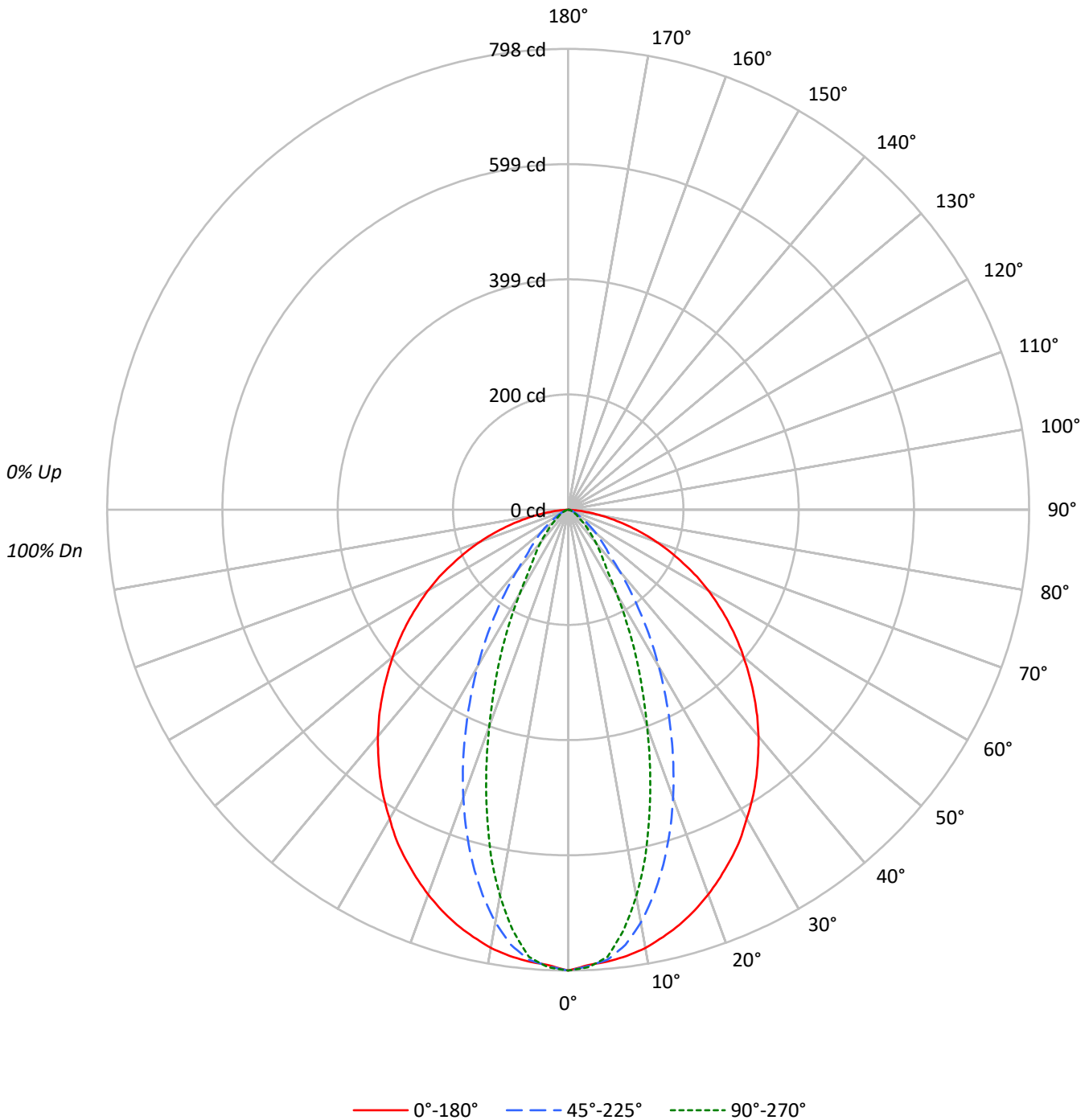
Lumens per Lamp: N/A
Luminaire Lumens: 914.5 lumens
Efficiency: N/A
Efficacy: 38.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	15119	15119	15119
5°	14935	14878	14785
10°	14825	13959	13076
15°	14597	12486	10664
20°	14295	10706	8045
25°	13941	8769	5745
30°	13520	6845	3658
35°	13119	5021	2442
40°	12673	3386	1838
45°	12183	2385	1310
50°	11675	1816	923
55°	11178	1258	677
60°	10636	853	557
65°	9863	614	439
70°	8990	487	377
75°	7803	432	285
80°	6186	316	316
85°	3391	435	217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12183 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	8.0
10°-20°	179.1	19.6
20°-30°	204.6	22.4
30°-40°	173.5	19.0
40°-50°	129.4	14.2
50°-60°	83.7	9.1
60°-70°	46.6	5.1
70°-80°	20.5	2.2
80°-90°	4.2	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
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0°-30°	456.6	49.9
0°-40°	630.1	68.9
0°-60°	843.2	92.2
0°-90°	914.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	914.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	785	795	782	774	777	75
15°	744	726	637	569	544	210
25°	667	589	420	307	275	307
35°	567	427	217	118	106	355
45°	455	270	89	58	49	351
55°	338	128	38	24	20	303
65°	220	47	14	11	10	219
75°	107	10	6	5	4	114
85°	16	1	2	1	1	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	798.0	798.0	798.0	798.0	798.0
2.5°	789.2	800.9	791.1	791.1	793.1
5°	785.3	795.1	782.3	774.5	777.4
7.5°	779.4	786.3	759.8	736.4	734.4
10°	770.6	773.5	725.6	689.4	679.7
12.5°	757.9	751.0	683.6	632.7	616.1
15°	744.2	725.6	636.6	569.2	543.7
17.5°	727.6	694.3	584.8	502.7	471.4
20°	709.0	662.1	531.0	433.2	399.0
22.5°	688.5	625.9	475.3	367.7	333.5
25°	666.9	588.7	419.5	307.1	274.8
27.5°	644.5	549.6	364.8	252.3	217.1
30°	618.0	509.5	312.9	199.5	167.2
32.5°	593.6	467.4	265.0	154.5	127.1
35°	567.2	427.4	217.1	118.3	105.6
37.5°	539.8	387.3	175.0	99.7	89.0
40°	512.4	347.2	136.9	84.1	74.3
42.5°	484.1	308.0	105.6	70.4	60.6
45°	454.7	269.9	89.0	57.7	48.9
47.5°	425.4	231.8	74.3	46.0	39.1
50°	396.1	195.6	61.6	36.2	31.3
52.5°	367.7	161.4	48.9	29.3	25.4
55°	338.4	128.1	38.1	23.5	20.5
57.5°	309.0	99.7	29.3	19.6	17.6
60°	280.7	75.3	22.5	15.6	14.7
62.5°	251.3	60.6	17.6	12.7	11.7
65°	220.0	46.9	13.7	10.8	9.8
67.5°	191.7	34.2	10.8	8.8	7.8
70°	162.3	23.5	8.8	7.8	6.8
72.5°	134.0	14.7	6.8	5.9	5.9
75°	106.6	9.8	5.9	4.9	3.9
77.5°	81.2	5.9	3.9	3.9	2.9
80°	56.7	3.9	2.9	2.9	2.9
82.5°	35.2	2.9	2.0	2.0	2.0
85°	15.6	1.0	2.0	1.0	1.0
87.5°	2.9	1.0	1.0	1.0	1.0
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	17.69	19.01	18.05	19.32	19.63	4.01	5.33	4.37	5.64	5.96
	3H	20.16	21.33	20.54	21.66	22.02	4.85	6.02	5.23	6.35	6.72
	4H	21.11	22.20	21.52	22.56	22.94	5.13	6.22	5.53	6.57	6.95
	6H	21.80	22.80	22.22	23.17	23.57	5.31	6.32	5.73	6.69	7.08
	8H	22.00	22.95	22.43	23.34	23.74	5.39	6.34	5.82	6.73	7.14
	12H	22.08	22.99	22.51	23.37	23.80	5.42	6.32	5.85	6.71	7.14
4H	2H	17.47	18.56	17.87	18.91	19.30	4.58	5.67	4.98	6.02	6.40
	3H	19.96	20.85	20.37	21.25	21.66	5.60	6.50	6.02	6.90	7.31
	4H	20.90	21.70	21.33	22.12	22.56	5.97	6.77	6.41	7.19	7.63
	6H	21.66	22.35	22.12	22.79	23.26	6.26	6.95	6.72	7.39	7.86
	8H	21.90	22.54	22.37	22.99	23.46	6.36	7.00	6.83	7.45	7.92
	12H	22.03	22.60	22.51	23.08	23.55	6.41	6.98	6.90	7.46	7.94
8H	4H	20.77	21.41	21.24	21.86	22.33	6.34	6.99	6.81	7.44	7.91
	6H	21.51	22.03	22.01	22.53	23.01	6.70	7.22	7.20	7.72	8.20
	8H	21.75	22.22	22.27	22.74	23.23	6.84	7.31	7.36	7.83	8.32
	12H	21.90	22.31	22.42	22.81	23.38	6.93	7.34	7.45	7.84	8.41
12H	4H	20.72	21.29	21.21	21.77	22.25	6.47	7.03	6.95	7.52	7.99
	6H	21.45	21.92	21.97	22.43	22.92	6.82	7.29	7.34	7.80	8.30
	8H	21.71	22.12	22.22	22.62	23.19	7.00	7.42	7.52	7.91	8.48