

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: P1055383

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055383
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-H675D950-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

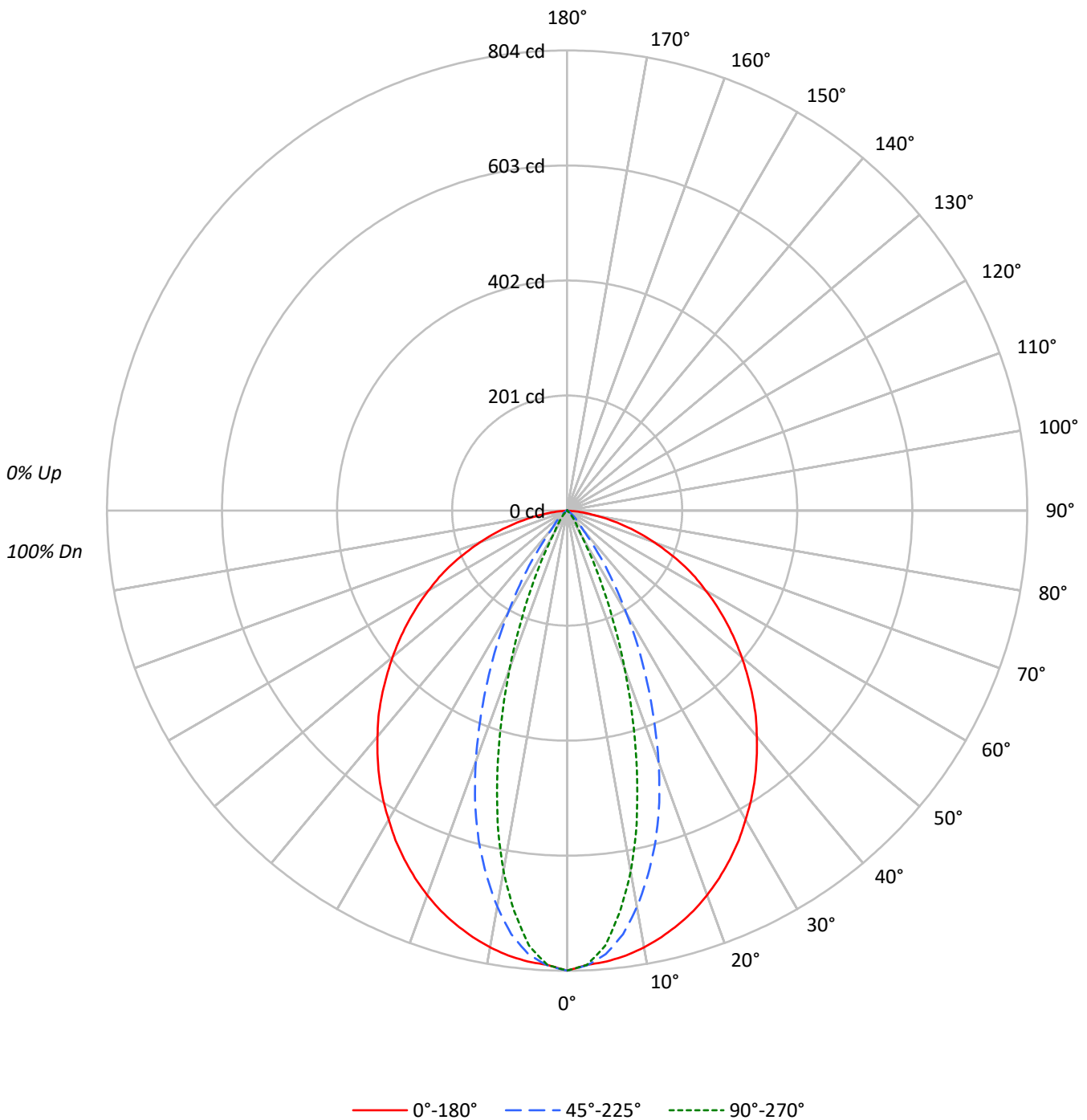
Lumens per Lamp: N/A
Luminaire Lumens: 731.2 lumens
Efficiency: N/A
Efficacy: 30.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	15227	15227	15227
5°	15040	14794	14513
10°	14911	13524	12316
15°	14695	11706	9223
20°	14416	9405	5905
25°	14058	6894	3031
30°	13642	4507	991
35°	13227	2500	576
40°	12749	1004	319
45°	12277	667	123
50°	11737	380	53
55°	11198	182	30
60°	10606	68	0
65°	9979	40	0
70°	8957	50	0
75°	7708	66	0
80°	5848	0	0
85°	2413	196	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12277 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	9.9
10°-20°	167.4	22.9
20°-30°	170.0	23.2
30°-40°	127.5	17.4
40°-50°	89.3	12.2
50°-60°	54.6	7.5
60°-70°	32.5	4.5
70°-80°	15.0	2.1
80°-90°	2.7	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°	409.4	56.0
0°-40°	537.0	73.4
0°-60°	680.9	93.1
0°-90°	731.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	731.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	791	798	778	763	763	75
15°	749	709	597	505	470	211
25°	672	554	330	188	145	310
35°	572	372	108	32	25	357
45°	458	197	25	7	5	353
55°	339	60	6	2	1	303
65°	223	18	1	1	0	219
75°	105	2	1	1	0	112
85°	11	0	1	1	0	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	803.7	803.7	803.7	803.7	803.7
2.5°	794.5	806.5	795.4	793.6	794.5
5°	790.8	798.2	777.9	763.1	763.1
7.5°	784.3	784.3	746.5	716.0	706.7
10°	775.1	764.9	703.0	654.1	640.2
12.5°	763.1	739.1	652.2	582.9	560.8
15°	749.2	708.6	596.8	505.3	470.2
17.5°	733.5	674.4	534.9	421.3	380.6
20°	715.0	637.4	466.5	335.4	292.9
22.5°	694.7	596.8	397.2	258.7	213.4
25°	672.5	554.3	329.8	188.5	145.0
27.5°	649.5	510.0	267.9	129.3	88.7
30°	623.6	463.8	206.0	76.7	45.3
32.5°	598.6	419.4	154.3	41.6	33.3
35°	571.9	372.3	108.1	32.3	24.9
37.5°	544.1	328.0	66.5	24.0	18.5
40°	515.5	282.7	40.6	17.6	12.9
42.5°	487.8	240.2	32.3	12.0	8.3
45°	458.2	196.8	24.9	7.4	4.6
47.5°	427.7	157.1	18.5	4.6	2.8
50°	398.2	121.9	12.9	2.8	1.8
52.5°	368.6	89.6	8.3	1.8	0.9
55°	339.0	60.0	5.5	1.8	0.9
57.5°	309.5	42.5	3.7	0.9	0.9
60°	279.9	33.3	1.8	0.9	0.0
62.5°	252.2	25.9	1.8	0.9	0.9
65°	222.6	17.6	0.9	0.9	0.0
67.5°	191.2	11.1	0.9	0.9	0.0
70°	161.7	6.5	0.9	0.9	0.0
72.5°	133.0	3.7	0.9	0.9	0.0
75°	105.3	1.8	0.9	0.9	0.0
77.5°	78.5	0.9	0.0	0.9	0.0
80°	53.6	0.0	0.0	0.9	0.0
82.5°	31.4	0.0	0.0	0.9	0.0
85°	11.1	0.0	0.9	0.9	0.0
87.5°	0.0	0.0	0.9	0.9	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	15.67	16.93	16.04	17.25	17.56	0.00	0.00	0.00	0.00	0.00
	3H	19.42	20.53	19.80	20.86	21.23	0.00	0.00	0.00	0.00	0.00
	4H	20.72	21.77	21.13	22.12	22.50	0.00	0.00	0.00	0.00	0.00
	6H	21.58	22.53	21.99	22.91	23.30	0.00	0.00	0.00	0.00	0.00
	8H	21.79	22.70	22.22	23.09	23.49	0.00	0.00	0.00	0.00	0.00
	12H	21.86	22.72	22.29	23.10	23.53	0.00	0.00	0.00	0.00	0.00
4H	2H	15.43	16.47	15.83	16.82	17.20	0.00	0.00	0.00	0.00	0.00
	3H	19.17	20.02	19.58	20.43	20.83	0.00	0.00	0.00	0.00	0.00
	4H	20.46	21.23	20.90	21.65	22.09	0.00	0.00	0.00	0.00	0.00
	6H	21.38	22.04	21.85	22.48	22.95	0.00	0.00	0.00	0.00	0.00
	8H	21.64	22.25	22.11	22.70	23.17	0.00	0.00	0.00	0.00	0.00
	12H	21.74	22.28	22.23	22.76	23.24	0.00	0.00	0.00	0.00	0.00
8H	4H	20.32	20.93	20.79	21.38	21.85	0.00	0.00	0.00	0.00	0.00
	6H	21.22	21.72	21.72	22.21	22.70	0.00	0.00	0.00	0.00	0.00
	8H	21.48	21.92	22.00	22.44	22.93	0.00	0.00	0.00	0.00	0.00
	12H	21.59	21.98	22.11	22.48	23.05	0.00	0.00	0.00	0.00	0.00
12H	4H	20.27	20.81	20.76	21.29	21.77	0.00	0.00	0.00	0.00	0.00
	6H	21.16	21.60	21.68	22.12	22.61	0.00	0.00	0.00	0.00	0.00
	8H	21.43	21.82	21.95	22.32	22.89	0.00	0.00	0.00	0.00	0.00