

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: P1055410

Luminaire Tested: S122R3DR-H865D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055410
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-H865D950-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

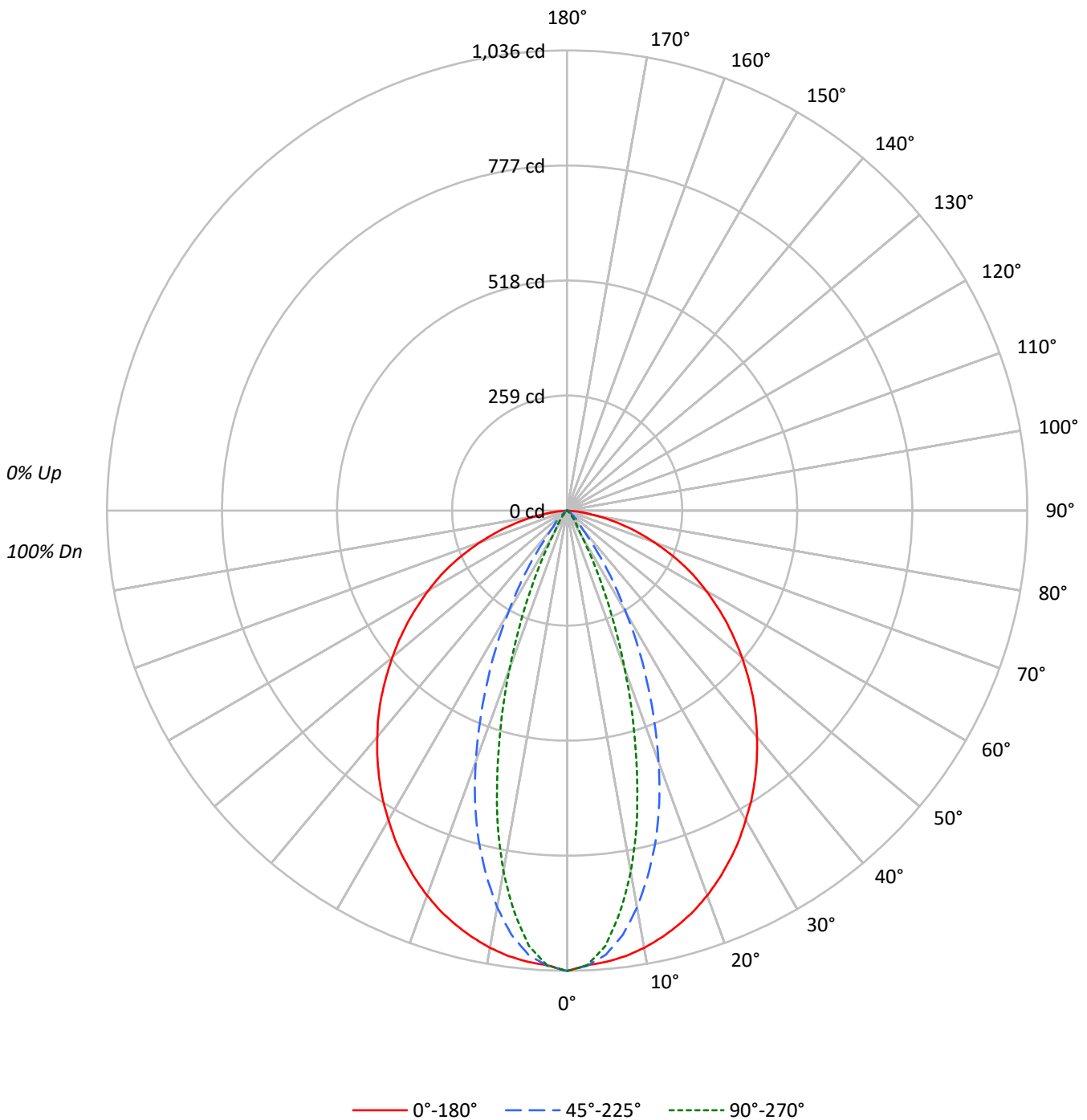
Lumens per Lamp: N/A
Luminaire Lumens: 943.0 lumens
Efficiency: N/A
Efficacy: 30.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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					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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19637	19637	19637
5°	19395	19079	18716
10°	19230	17443	15883
15°	18951	15095	11894
20°	18591	12131	7615
25°	18130	8891	3911
30°	17593	5813	1278
35°	17057	3224	745
40°	16442	1296	413
45°	15832	863	161
50°	15135	492	71
55°	14441	235	40
60°	13679	91	0
65°	12871	54	0
70°	11550	66	0
75°	9941	88	0
80°	7539	0	0
85°	3109	261	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15832 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	9.9
10°-20°	215.9	22.9
20°-30°	219.2	23.2
30°-40°	164.5	17.4
40°-50°	115.2	12.2
50°-60°	70.5	7.5
60°-70°	42.0	4.5
70°-80°	19.4	2.1
80°-90°	3.5	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°	528.0	56.0
0°-40°	692.5	73.4
0°-60°	878.2	93.1
0°-90°	943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	943.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1036	1036	1036	1036	1036	
5°	1020	1029	1003	984	984	97
15°	966	914	770	652	606	272
25°	867	715	425	243	187	399
35°	738	480	139	42	32	461
45°	591	254	32	10	6	455
55°	437	77	7	2	1	391
65°	287	23	1	1	0	283
75°	136	2	1	1	0	144
85°	14	0	1	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1036.5	1036.5	1036.5	1036.5	1036.5
2.5°	1024.6	1040.1	1025.8	1023.4	1024.6
5°	1019.8	1029.4	1003.2	984.1	984.1
7.5°	1011.5	1011.5	962.7	923.3	911.4
10°	999.6	986.5	906.7	843.5	825.6
12.5°	984.1	953.1	841.1	751.8	723.2
15°	966.2	913.8	769.6	651.7	606.4
17.5°	946.0	869.7	689.8	543.3	490.9
20°	922.1	822.1	601.7	432.5	377.7
22.5°	895.9	769.6	512.3	333.6	275.2
25°	867.3	714.8	425.3	243.0	187.1
27.5°	837.6	657.7	345.5	166.8	114.4
30°	804.2	598.1	265.7	98.9	58.4
32.5°	772.0	540.9	199.0	53.6	42.9
35°	737.5	480.1	139.4	41.7	32.2
37.5°	701.7	422.9	85.8	31.0	23.8
40°	664.8	364.6	52.4	22.6	16.7
42.5°	629.1	309.8	41.7	15.5	10.7
45°	590.9	253.8	32.2	9.5	6.0
47.5°	551.6	202.5	23.8	6.0	3.6
50°	513.5	157.3	16.7	3.6	2.4
52.5°	475.4	115.6	10.7	2.4	1.2
55°	437.2	77.4	7.1	2.4	1.2
57.5°	399.1	54.8	4.8	1.2	1.2
60°	361.0	42.9	2.4	1.2	0.0
62.5°	325.3	33.4	2.4	1.2	1.2
65°	287.1	22.6	1.2	1.2	0.0
67.5°	246.6	14.3	1.2	1.2	0.0
70°	208.5	8.3	1.2	1.2	0.0
72.5°	171.6	4.8	1.2	1.2	0.0
75°	135.8	2.4	1.2	1.2	0.0
77.5°	101.3	1.2	0.0	1.2	0.0
80°	69.1	0.0	0.0	1.2	0.0
82.5°	40.5	0.0	0.0	1.2	0.0
85°	14.3	0.0	1.2	1.2	0.0
87.5°	0.0	0.0	1.2	1.2	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	16.56	17.82	16.92	18.13	18.44	0.00	0.00	0.00	0.00	0.00
	3H	20.30	21.41	20.68	21.75	22.11	0.00	0.00	0.00	0.00	0.00
	4H	21.61	22.65	22.01	23.00	23.38	0.00	0.00	0.00	0.00	0.00
	6H	22.46	23.42	22.88	23.79	24.18	0.00	0.00	0.00	0.00	0.00
	8H	22.68	23.58	23.11	23.97	24.38	0.00	0.00	0.00	0.00	0.00
	12H	22.74	23.60	23.17	23.99	24.42	0.00	0.00	0.00	0.00	0.00
4H	2H	16.31	17.35	16.71	17.70	18.09	0.00	0.00	0.00	0.00	0.00
	3H	20.05	20.90	20.46	21.31	21.71	0.00	0.00	0.00	0.00	0.00
	4H	21.35	22.11	21.78	22.53	22.97	0.00	0.00	0.00	0.00	0.00
	6H	22.27	22.92	22.73	23.37	23.84	0.00	0.00	0.00	0.00	0.00
	8H	22.52	23.14	23.00	23.58	24.06	0.00	0.00	0.00	0.00	0.00
	12H	22.63	23.16	23.11	23.65	24.12	0.00	0.00	0.00	0.00	0.00
8H	4H	21.20	21.81	21.67	22.26	22.73	0.00	0.00	0.00	0.00	0.00
	6H	22.10	22.60	22.61	23.10	23.58	0.00	0.00	0.00	0.00	0.00
	8H	22.36	22.80	22.89	23.32	23.81	0.00	0.00	0.00	0.00	0.00
	12H	22.48	22.87	23.00	23.36	23.94	0.00	0.00	0.00	0.00	0.00
12H	4H	21.15	21.69	21.64	22.18	22.65	0.00	0.00	0.00	0.00	0.00
	6H	22.04	22.48	22.56	23.00	23.49	0.00	0.00	0.00	0.00	0.00
	8H	22.32	22.71	22.83	23.20	23.77	0.00	0.00	0.00	0.00	0.00