

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: P1055331

Luminaire Tested: S122R3DR-H290D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055331
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H290D950-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

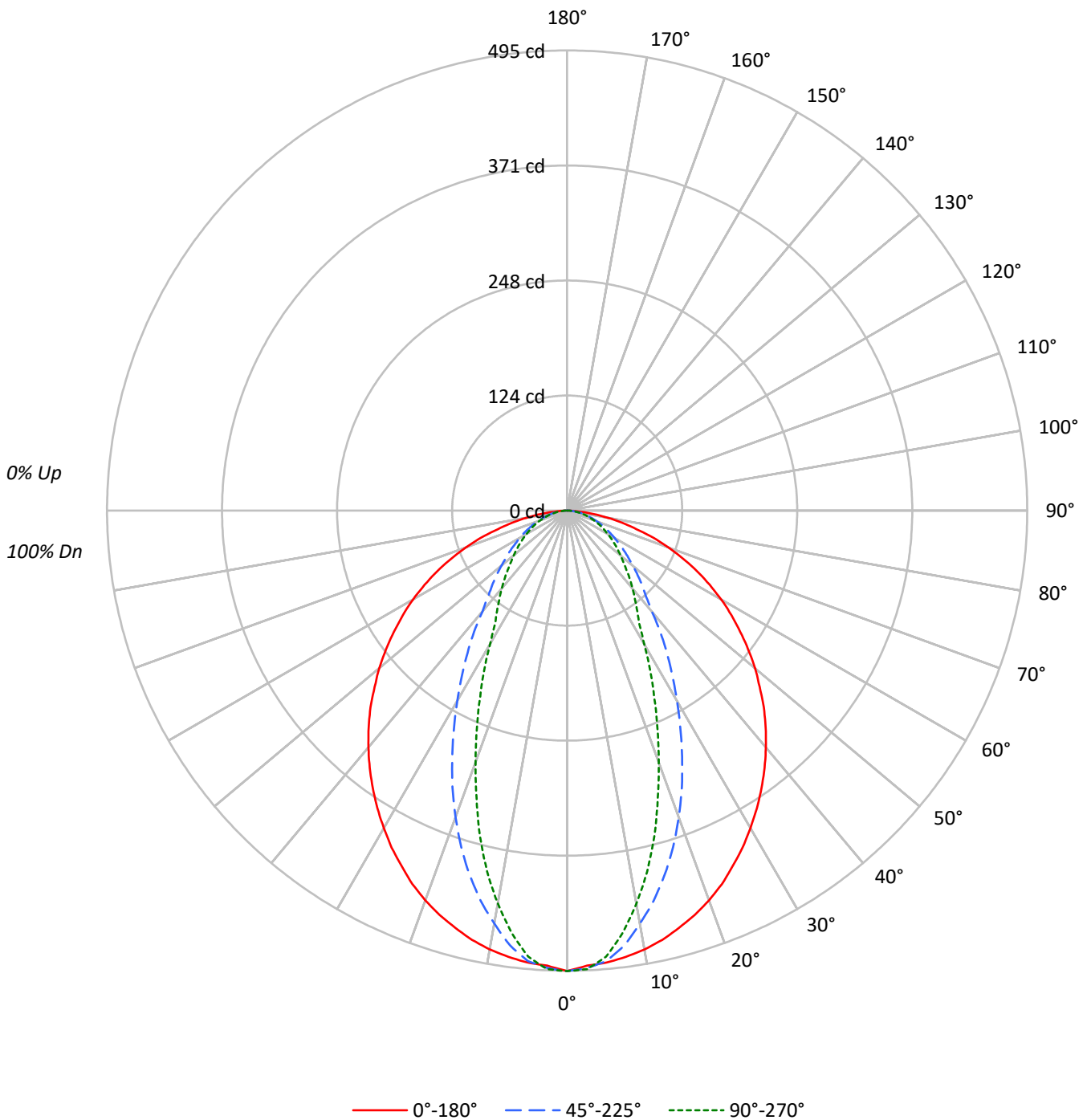
Lumens per Lamp: N/A
Luminaire Lumens: 749.3 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89				87	
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77				75	
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68				66	
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60				58	
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54				52	
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48				46	
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40				38	
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37				35	
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34				32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9386	9386	9386
5°	9281	9249	9161
10°	9221	8678	8263
15°	9117	7954	7108
20°	8994	7073	5805
25°	8815	6112	4632
30°	8626	5165	3616
35°	8430	4320	3037
40°	8226	3505	2706
45°	8014	3062	2419
50°	7778	2712	2211
55°	7511	2448	2051
60°	7252	2228	1914
65°	6908	2044	1802
70°	6404	1906	1701
75°	5673	1728	1610
80°	4833	1626	1495
85°	3326	1435	1348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8014 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	6.1
10°-20°	114.6	15.3
20°-30°	141.2	18.8
30°-40°	135.5	18.1
40°-50°	116.9	15.6
50°-60°	90.7	12.1
60°-70°	62.1	8.3
70°-80°	33.7	4.5
80°-90°	9.2	1.2
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°	301.2	40.2
0°-40°	436.7	58.3
0°-60°	644.3	86.0
0°-90°	749.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	749.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	488	495	486	480	482	46
15°	465	451	406	372	362	131
25°	422	376	292	239	222	194
35°	364	289	187	139	131	228
45°	299	201	114	94	90	230
55°	227	121	74	64	62	204
65°	154	66	46	41	40	152
75°	78	30	24	22	22	83
85°	15	8	7	7	6	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	495.4	495.4	495.4	495.4	495.4
2.5°	490.0	498.3	492.5	492.5	493.7
5°	488.0	495.0	486.3	480.1	481.7
7.5°	484.2	489.2	471.8	458.5	458.1
10°	479.3	479.7	451.1	433.7	429.5
12.5°	473.0	466.4	430.0	403.9	397.7
15°	464.8	450.7	405.5	372.4	362.4
17.5°	456.1	434.5	379.4	338.0	324.3
20°	446.1	415.0	350.8	303.6	287.9
22.5°	434.9	396.4	322.3	270.5	253.9
25°	421.7	376.5	292.4	238.6	221.6
27.5°	408.8	356.2	263.9	210.4	193.0
30°	394.3	334.3	236.1	183.5	165.3
32.5°	379.8	311.9	210.4	157.8	144.1
35°	364.5	289.1	186.8	139.2	131.3
37.5°	348.8	266.8	164.4	126.8	119.7
40°	332.6	244.4	141.7	114.7	109.4
42.5°	316.0	222.4	125.9	104.8	99.8
45°	299.1	201.3	114.3	94.4	90.3
47.5°	280.8	180.2	103.1	85.7	82.0
50°	263.9	159.9	92.0	77.9	75.0
52.5°	245.6	140.0	82.8	70.8	68.3
55°	227.4	121.0	74.1	64.2	62.1
57.5°	209.6	102.7	65.9	58.0	56.3
60°	191.4	88.2	58.8	52.2	50.5
62.5°	172.7	76.6	52.2	46.8	45.1
65°	154.1	65.9	45.6	41.4	40.2
67.5°	134.6	55.5	39.8	36.5	35.6
70°	115.6	46.4	34.4	31.5	30.7
72.5°	96.9	37.7	29.0	26.9	26.1
75°	77.5	30.2	23.6	22.4	22.0
77.5°	60.5	23.6	19.1	18.2	17.8
80°	44.3	17.4	14.9	14.1	13.7
82.5°	29.4	12.0	10.8	10.4	9.9
85°	15.3	7.5	6.6	6.6	6.2
87.5°	5.0	3.3	3.3	3.3	2.9
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	17.39	18.86	17.75	19.17	19.48	12.19	13.66	12.56	13.98	14.29
	3H	19.72	21.03	20.10	21.36	21.73	13.84	15.16	14.22	15.49	15.85
	4H	20.61	21.85	21.01	22.20	22.58	14.48	15.71	14.88	16.06	16.44
	6H	21.28	22.42	21.69	22.78	23.18	14.97	16.11	15.39	16.48	16.87
	8H	21.48	22.57	21.91	22.96	23.36	15.14	16.23	15.57	16.62	17.02
	12H	21.60	22.64	22.03	23.02	23.45	15.26	16.30	15.69	16.68	17.11
4H	2H	17.40	18.64	17.80	18.99	19.37	12.91	14.15	13.31	14.49	14.87
	3H	19.82	20.84	20.23	21.24	21.64	14.76	15.78	15.17	16.19	16.59
	4H	20.75	21.67	21.18	22.09	22.53	15.51	16.43	15.94	16.85	17.29
	6H	21.52	22.33	21.98	22.77	23.23	16.12	16.92	16.58	17.37	17.83
	8H	21.79	22.54	22.26	22.99	23.46	16.34	17.09	16.80	17.53	18.00
	12H	21.97	22.64	22.45	23.12	23.59	16.50	17.17	16.98	17.65	18.12
8H	4H	20.74	21.49	21.20	21.93	22.40	15.89	16.64	16.35	17.08	17.55
	6H	21.55	22.16	22.04	22.66	23.14	16.62	17.24	17.12	17.73	18.21
	8H	21.85	22.40	22.36	22.91	23.40	16.92	17.47	17.44	17.99	18.47
	12H	22.08	22.57	22.59	23.06	23.63	17.16	17.65	17.67	18.14	18.71
12H	4H	20.72	21.39	21.20	21.87	22.34	15.94	16.61	16.43	17.09	17.56
	6H	21.52	22.08	22.04	22.59	23.08	16.71	17.27	17.23	17.78	18.26
	8H	21.86	22.35	22.37	22.84	23.40	17.07	17.56	17.58	18.05	18.61