

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: P1055292

Luminaire Tested: S122R3DR-H1005D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055292
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-H1005D927-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

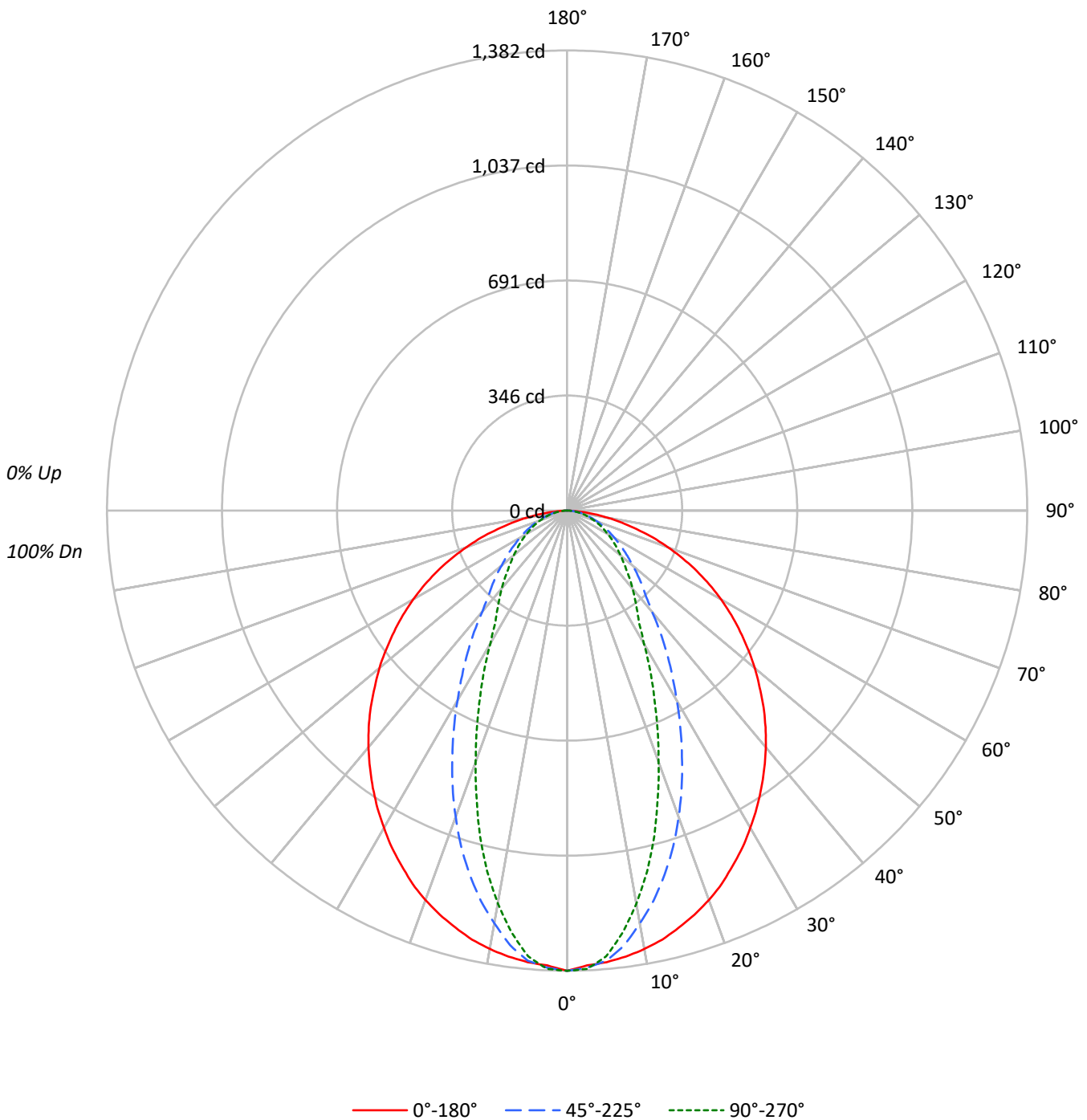
Lumens per Lamp: N/A
Luminaire Lumens: 2090.7 lumens
Efficiency: N/A
Efficacy: 57.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26187	26187	26187
5°	25891	25804	25562
10°	25723	24213	23057
15°	25434	22191	19834
20°	25095	19736	16194
25°	24594	17056	12925
30°	24069	14410	10087
35°	23522	12055	8474
40°	22951	9774	7546
45°	22356	8547	6749
50°	21699	7563	6166
55°	20958	6834	5728
60°	20230	6218	5343
65°	19272	5698	5025
70°	17859	5312	4736
75°	15819	4824	4487
80°	13496	4539	4157
85°	9304	4022	3761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22356 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.7	6.1
10°-20°	319.8	15.3
20°-30°	394.1	18.8
30°-40°	378.0	18.1
40°-50°	326.1	15.6
50°-60°	253.0	12.1
60°-70°	173.2	8.3
70°-80°	94.1	4.5
80°-90°	25.8	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°	840.5	40.2
0°-40°	1218.5	58.3
0°-60°	1797.6	86.0
0°-90°	2090.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2090.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1382	1382	1382	1382	1382	
5°	1361	1381	1357	1340	1344	129
15°	1297	1257	1131	1039	1011	366
25°	1176	1050	816	666	618	542
35°	1017	807	521	388	366	636
45°	834	562	319	264	252	643
55°	634	338	207	179	173	568
65°	430	184	127	116	112	424
75°	216	84	66	62	61	232
85°	43	21	18	18	17	55
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1382.2	1382.2	1382.2	1382.2	1382.2
2.5°	1367.2	1390.3	1374.1	1374.1	1377.6
5°	1361.4	1381.1	1356.8	1339.5	1344.1
7.5°	1351.0	1364.9	1316.3	1279.4	1278.2
10°	1337.1	1338.3	1258.6	1210.0	1198.5
12.5°	1319.8	1301.3	1199.6	1126.8	1109.5
15°	1296.7	1257.4	1131.4	1039.0	1011.2
17.5°	1272.4	1212.3	1058.6	943.1	904.9
20°	1244.7	1158.0	978.9	847.1	803.2
22.5°	1213.5	1106.0	899.1	754.7	708.4
25°	1176.5	1050.5	815.9	665.7	618.3
27.5°	1140.7	993.9	736.2	587.1	538.6
30°	1100.2	932.6	658.7	512.0	461.1
32.5°	1059.8	870.2	587.1	440.3	402.2
35°	1017.0	806.7	521.2	388.3	366.4
37.5°	973.1	744.3	458.8	353.6	334.0
40°	928.0	681.9	395.2	320.1	305.1
42.5°	881.8	620.6	351.3	292.4	278.5
45°	834.4	561.7	319.0	263.5	251.9
47.5°	783.6	502.7	287.8	239.2	228.8
50°	736.2	446.1	256.6	217.3	209.2
52.5°	685.3	390.6	231.1	197.6	190.7
55°	634.5	337.5	206.9	179.1	173.4
57.5°	584.8	286.6	183.8	161.8	157.2
60°	533.9	246.2	164.1	145.6	141.0
62.5°	481.9	213.8	145.6	130.6	126.0
65°	429.9	183.8	127.1	115.6	112.1
67.5°	375.6	154.9	110.9	101.7	99.4
70°	322.4	129.4	95.9	87.8	85.5
72.5°	270.4	105.2	80.9	75.1	72.8
75°	216.1	84.4	65.9	62.4	61.3
77.5°	168.7	65.9	53.2	50.9	49.7
80°	123.7	48.5	41.6	39.3	38.1
82.5°	82.1	33.5	30.0	28.9	27.7
85°	42.8	20.8	18.5	18.5	17.3
87.5°	13.9	9.2	9.2	9.2	8.1
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	20.95	22.42	21.32	22.74	23.05	15.76	17.23	16.12	17.54	17.86
	3H	23.28	24.60	23.66	24.93	25.29	17.41	18.72	17.78	19.05	19.41
	4H	24.18	25.41	24.58	25.76	26.14	18.04	19.28	18.44	19.63	20.01
	6H	24.84	25.98	25.25	26.35	26.74	18.54	19.68	18.95	20.04	20.44
	8H	25.05	26.13	25.48	26.52	26.93	18.71	19.79	19.13	20.18	20.58
	12H	25.16	26.20	25.60	26.58	27.01	18.82	19.86	19.25	20.24	20.67
4H	2H	20.97	22.20	21.37	22.55	22.93	16.47	17.71	16.87	18.06	18.44
	3H	23.38	24.41	23.79	24.81	25.21	18.32	19.35	18.73	19.75	20.15
	4H	24.31	25.23	24.74	25.65	26.09	19.07	19.99	19.50	20.41	20.85
	6H	25.09	25.89	25.55	26.33	26.80	19.68	20.49	20.14	20.93	21.39
	8H	25.36	26.11	25.82	26.55	27.02	19.90	20.65	20.37	21.09	21.56
	12H	25.54	26.21	26.02	26.68	27.16	20.06	20.73	20.54	21.21	21.68
8H	4H	24.30	25.05	24.77	25.50	25.97	19.45	20.20	19.91	20.64	21.11
	6H	25.11	25.73	25.61	26.22	26.70	20.19	20.80	20.68	21.30	21.78
	8H	25.41	25.97	25.93	26.48	26.97	20.48	21.04	21.00	21.55	22.04
	12H	25.65	26.13	26.16	26.63	27.19	20.73	21.21	21.24	21.71	22.27
12H	4H	24.29	24.95	24.77	25.43	25.90	19.51	20.17	19.99	20.65	21.12
	6H	25.09	25.64	25.60	26.15	26.64	20.27	20.83	20.79	21.34	21.83
	8H	25.42	25.91	25.93	26.40	26.97	20.63	21.12	21.14	21.61	22.18