

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: P1055285

Luminaire Tested: S122R3DR-H1005D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055285
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-H1005D840-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

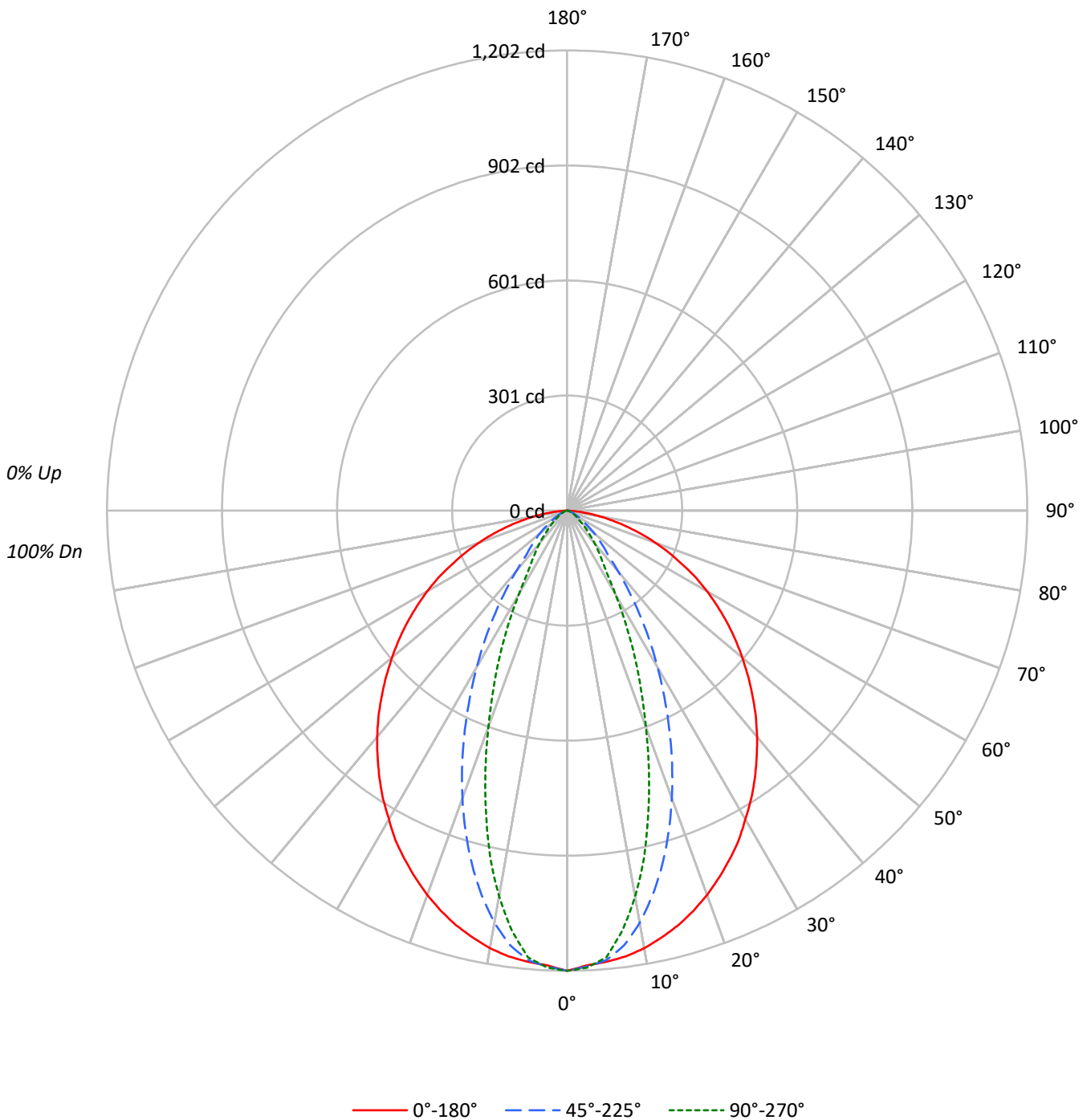
Lumens per Lamp: N/A
Luminaire Lumens: 1377.8 lumens
Efficiency: N/A
Efficacy: 37.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	22777	22777	22777
5°	22499	22415	22276
10°	22334	21031	19698
15°	21991	18812	16066
20°	21535	16129	12119
25°	21005	13212	8654
30°	20369	10313	5511
35°	19763	7565	3680
40°	19093	5102	2770
45°	18356	3593	1975
50°	17587	2735	1388
55°	16839	1899	1021
60°	16021	1285	837
65°	14861	923	659
70°	13549	737	571
75°	11756	644	432
80°	9318	480	480
85°	5130	630	326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18356 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	8.0
10°-20°	269.8	19.6
20°-30°	308.2	22.4
30°-40°	261.3	19.0
40°-50°	195.0	14.2
50°-60°	126.0	9.1
60°-70°	70.3	5.1
70°-80°	30.8	2.2
80°-90°	6.4	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
0°-30°	687.9	49.9
0°-40°	949.2	68.9
0°-60°	1270.3	92.2
0°-90°	1377.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1377.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1202	1202	1202	1202	1202	
5°	1183	1198	1179	1167	1171	112
15°	1121	1093	959	857	819	316
25°	1005	887	632	463	414	462
35°	854	644	327	178	159	534
45°	685	407	134	87	74	529
55°	510	193	58	35	31	456
65°	332	71	21	16	15	330
75°	161	15	9	7	6	171
85°	24	2	3	2	2	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1202.2	1202.2	1202.2	1202.2	1202.2
2.5°	1188.9	1206.6	1191.9	1191.9	1194.8
5°	1183.0	1197.8	1178.6	1166.8	1171.3
7.5°	1174.2	1184.5	1144.7	1109.4	1106.4
10°	1160.9	1165.4	1093.2	1038.7	1023.9
12.5°	1141.8	1131.5	1029.8	953.2	928.2
15°	1121.2	1093.2	959.1	857.4	819.1
17.5°	1096.1	1046.0	881.0	757.3	710.1
20°	1068.1	997.4	800.0	652.7	601.1
22.5°	1037.2	942.9	716.0	554.0	502.4
25°	1004.8	886.9	632.0	462.6	414.0
27.5°	970.9	828.0	549.5	380.1	327.1
30°	931.1	767.6	471.4	300.5	251.9
32.5°	894.3	704.2	399.3	232.8	191.5
35°	854.5	643.8	327.1	178.3	159.1
37.5°	813.2	583.4	263.7	150.3	134.1
40°	772.0	523.0	206.3	126.7	112.0
42.5°	729.3	464.1	159.1	106.1	91.3
45°	685.1	406.6	134.1	86.9	73.7
47.5°	640.9	349.2	112.0	69.2	58.9
50°	596.7	294.7	92.8	54.5	47.1
52.5°	554.0	243.1	73.7	44.2	38.3
55°	509.8	193.0	57.5	35.4	30.9
57.5°	465.6	150.3	44.2	29.5	26.5
60°	422.8	113.4	33.9	23.6	22.1
62.5°	378.6	91.3	26.5	19.2	17.7
65°	331.5	70.7	20.6	16.2	14.7
67.5°	288.8	51.6	16.2	13.3	11.8
70°	244.6	35.4	13.3	11.8	10.3
72.5°	201.8	22.1	10.3	8.8	8.8
75°	160.6	14.7	8.8	7.4	5.9
77.5°	122.3	8.8	5.9	5.9	4.4
80°	85.4	5.9	4.4	4.4	4.4
82.5°	53.0	4.4	2.9	2.9	2.9
85°	23.6	1.5	2.9	1.5	1.5
87.5°	4.4	1.5	1.5	1.5	1.5
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	19.11	20.43	19.48	20.74	21.06	5.43	6.75	5.79	7.06	7.37
	3H	21.58	22.75	21.96	23.08	23.45	6.28	7.45	6.66	7.78	8.14
	4H	22.54	23.63	22.94	23.98	24.36	6.55	7.64	6.95	7.99	8.38
	6H	23.23	24.23	23.64	24.60	24.99	6.74	7.74	7.16	8.11	8.51
	8H	23.42	24.37	23.85	24.76	25.17	6.81	7.76	7.24	8.15	8.56
	12H	23.50	24.41	23.93	24.79	25.22	6.84	7.75	7.27	8.13	8.56
4H	2H	18.90	19.99	19.30	20.34	20.72	6.00	7.09	6.40	7.44	7.82
	3H	21.38	22.28	21.79	22.68	23.08	7.03	7.92	7.44	8.33	8.73
	4H	22.32	23.12	22.76	23.54	23.99	7.40	8.20	7.83	8.62	9.06
	6H	23.08	23.77	23.54	24.22	24.68	7.69	8.38	8.15	8.82	9.29
	8H	23.32	23.97	23.79	24.41	24.88	7.78	8.43	8.25	8.87	9.35
	12H	23.45	24.02	23.94	24.50	24.98	7.83	8.40	8.31	8.88	9.35
8H	4H	22.19	22.84	22.66	23.28	23.75	7.77	8.41	8.24	8.86	9.33
	6H	22.93	23.46	23.43	23.95	24.43	8.13	8.65	8.63	9.15	9.63
	8H	23.17	23.65	23.70	24.16	24.65	8.26	8.73	8.78	9.25	9.74
	12H	23.32	23.74	23.84	24.23	24.81	8.34	8.76	8.86	9.25	9.82
12H	4H	22.15	22.72	22.63	23.20	23.67	7.89	8.46	8.38	8.94	9.41
	6H	22.87	23.34	23.39	23.86	24.35	8.24	8.71	8.77	9.23	9.72
	8H	23.13	23.55	23.65	24.04	24.61	8.42	8.83	8.93	9.33	9.90