

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: P1055283

Luminaire Tested: S122R3DR-H1005D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055283
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-H1005D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

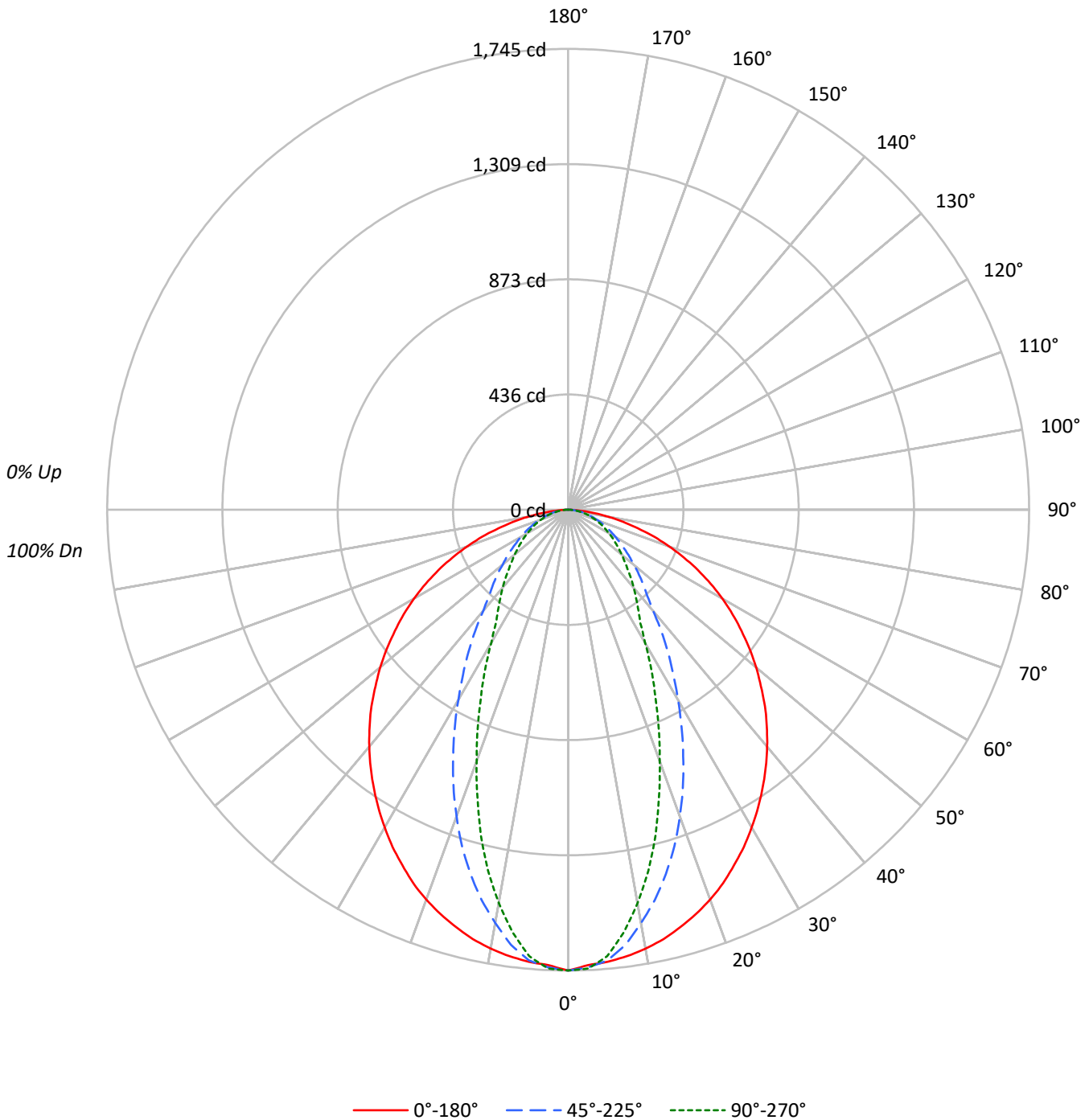
Lumens per Lamp: N/A
Luminaire Lumens: 2639.2 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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	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°	33057	33057	33057
5°	32685	32573	32268
10°	32472	30564	29105
15°	32106	28013	25038
20°	31678	24914	20442
25°	31045	21532	16316
30°	30385	18193	12734
35°	29693	15219	10697
40°	28974	12339	9524
45°	28222	10790	8520
50°	27391	9547	7784
55°	26455	8624	7227
60°	25539	7851	6745
65°	24329	7195	6343
70°	22545	6708	5983
75°	19969	6090	5658
80°	17031	5728	5248
85°	11738	5065	4761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 28222 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	6.1
10°-20°	403.7	15.3
20°-30°	497.4	18.8
30°-40°	477.2	18.1
40°-50°	411.6	15.6
50°-60°	319.3	12.1
60°-70°	218.7	8.3
70°-80°	118.7	4.5
80°-90°	32.5	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°	1061.0	40.2
0°-40°	1538.2	58.3
0°-60°	2269.2	86.0
0°-90°	2639.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2639.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1745	1745	1745	1745	1745	
5°	1719	1743	1713	1691	1697	163
15°	1637	1587	1428	1312	1276	462
25°	1485	1326	1030	840	780	685
35°	1284	1018	658	490	462	803
45°	1053	709	403	333	318	812
55°	801	426	261	226	219	717
65°	543	232	160	146	142	536
75°	273	106	83	79	77	292
85°	54	26	23	23	22	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1744.8	1744.8	1744.8	1744.8	1744.8
2.5°	1725.9	1755.0	1734.6	1734.6	1739.0
5°	1718.6	1743.4	1712.7	1690.8	1696.7
7.5°	1705.4	1722.9	1661.7	1615.0	1613.5
10°	1687.9	1689.4	1588.7	1527.5	1512.9
12.5°	1666.0	1642.7	1514.3	1422.4	1400.5
15°	1636.9	1587.3	1428.2	1311.5	1276.5
17.5°	1606.2	1530.4	1336.3	1190.4	1142.3
20°	1571.2	1461.8	1235.7	1069.4	1013.9
22.5°	1531.8	1396.2	1135.0	952.7	894.3
25°	1485.1	1326.1	1030.0	840.3	780.5
27.5°	1439.9	1254.6	929.3	741.1	679.8
30°	1388.9	1177.3	831.6	646.3	582.1
32.5°	1337.8	1098.5	741.1	555.8	507.7
35°	1283.8	1018.3	658.0	490.2	462.5
37.5°	1228.4	939.5	579.2	446.4	421.6
40°	1171.5	860.7	498.9	404.1	385.1
42.5°	1113.1	783.4	443.5	369.1	351.6
45°	1053.3	709.0	402.7	332.6	318.0
47.5°	989.1	634.6	363.3	302.0	288.9
50°	929.3	563.1	323.9	274.3	264.1
52.5°	865.1	493.1	291.8	249.5	240.7
55°	800.9	426.0	261.1	226.1	218.8
57.5°	738.2	361.8	232.0	204.2	198.4
60°	674.0	310.7	207.2	183.8	178.0
62.5°	608.4	269.9	183.8	164.9	159.0
65°	542.7	232.0	160.5	145.9	141.5
67.5°	474.1	195.5	140.1	128.4	125.5
70°	407.0	163.4	121.1	110.9	108.0
72.5°	341.4	132.8	102.1	94.8	91.9
75°	272.8	106.5	83.2	78.8	77.3
77.5°	213.0	83.2	67.1	64.2	62.7
80°	156.1	61.3	52.5	49.6	48.1
82.5°	103.6	42.3	37.9	36.5	35.0
85°	54.0	26.3	23.3	23.3	21.9
87.5°	17.5	11.7	11.7	11.7	10.2
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	21.76	23.23	22.13	23.54	23.86	16.57	18.04	16.93	18.35	18.66
	3H	24.09	25.41	24.47	25.74	26.10	18.22	19.53	18.59	19.86	20.22
	4H	24.99	26.22	25.39	26.57	26.95	18.85	20.09	19.25	20.43	20.81
	6H	25.65	26.79	26.06	27.16	27.55	19.34	20.48	19.76	20.85	21.24
	8H	25.86	26.94	26.29	27.33	27.73	19.51	20.60	19.94	20.99	21.39
	12H	25.97	27.01	26.41	27.39	27.82	19.63	20.67	20.06	21.05	21.48
4H	2H	21.78	23.01	22.18	23.36	23.74	17.28	18.52	17.68	18.87	19.25
	3H	24.19	25.22	24.60	25.62	26.02	19.13	20.16	19.54	20.56	20.96
	4H	25.12	26.04	25.55	26.46	26.90	19.88	20.80	20.31	21.22	21.66
	6H	25.90	26.70	26.36	27.14	27.61	20.49	21.30	20.95	21.74	22.20
	8H	26.17	26.92	26.63	27.36	27.83	20.71	21.46	21.17	21.90	22.37
	12H	26.35	27.01	26.83	27.49	27.97	20.87	21.54	21.35	22.02	22.49
8H	4H	25.11	25.86	25.58	26.31	26.78	20.26	21.01	20.72	21.45	21.92
	6H	25.92	26.54	26.42	27.03	27.51	21.00	21.61	21.49	22.11	22.58
	8H	26.22	26.78	26.74	27.29	27.78	21.29	21.84	21.81	22.36	22.84
	12H	26.45	26.94	26.97	27.44	28.00	21.54	22.02	22.05	22.52	23.08
12H	4H	25.09	25.76	25.58	26.24	26.71	20.32	20.98	20.80	21.46	21.93
	6H	25.90	26.45	26.41	26.96	27.45	21.08	21.64	21.60	22.15	22.64
	8H	26.23	26.72	26.74	27.21	27.78	21.44	21.93	21.95	22.42	22.99