

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: P1055304

Luminaire Tested: S122R3DR-H1005D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055304
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-H1005D950-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

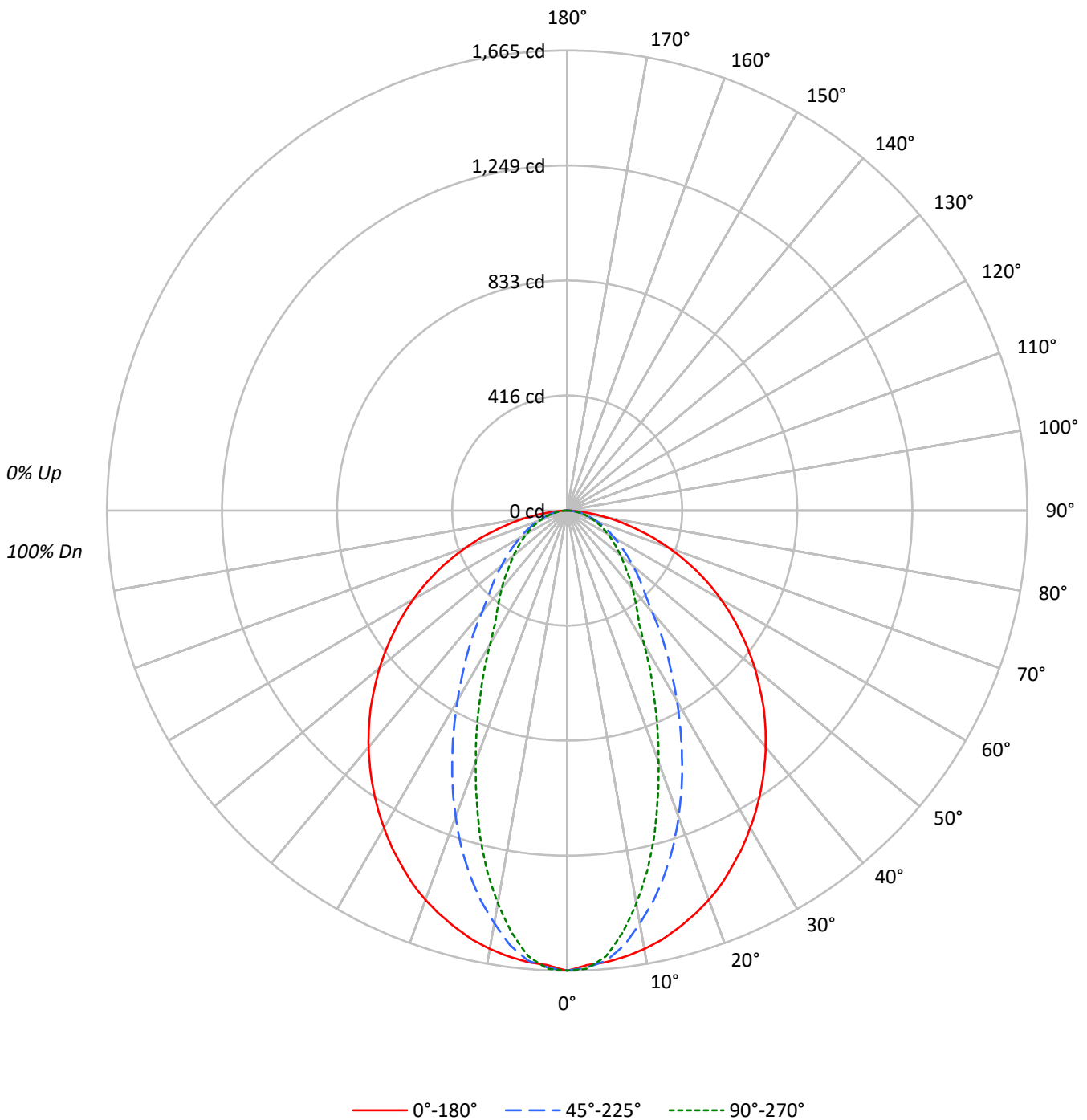
Lumens per Lamp: N/A
Luminaire Lumens: 2517.8 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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																		
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	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	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°	31537	31537	31537
5°	31180	31074	30783
10°	30979	29157	27766
15°	30630	26724	23886
20°	30220	23767	19502
25°	29617	20541	15565
30°	28987	17355	12148
35°	28328	14518	10204
40°	27641	11772	9087
45°	26925	10291	8129
50°	26132	9108	7425
55°	25239	8228	6897
60°	24364	7487	6434
65°	23208	6863	6052
70°	21509	6398	5706
75°	19054	5805	5402
80°	16246	5466	5008
85°	11195	4848	4543

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 26925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.5	6.1
10°-20°	385.1	15.3
20°-30°	474.5	18.8
30°-40°	455.3	18.1
40°-50°	392.7	15.6
50°-60°	304.7	12.1
60°-70°	208.6	8.3
70°-80°	113.3	4.5
80°-90°	31.0	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°	1012.2	40.2
0°-40°	1467.5	58.3
0°-60°	2164.8	86.0
0°-90°	2517.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2517.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1665	1665	1665	1665	1665	
5°	1640	1663	1634	1613	1619	156
15°	1562	1514	1362	1251	1218	440
25°	1417	1265	983	802	745	653
35°	1225	972	628	468	441	766
45°	1005	676	384	317	303	774
55°	764	406	249	216	209	684
65°	518	221	153	139	135	511
75°	260	102	79	75	74	279
85°	52	25	22	22	21	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1664.6	1664.6	1664.6	1664.6	1664.6
2.5°	1646.5	1674.3	1654.8	1654.8	1659.0
5°	1639.5	1663.2	1633.9	1613.1	1618.6
7.5°	1627.0	1643.7	1585.2	1540.7	1539.3
10°	1610.3	1611.7	1515.6	1457.2	1443.3
12.5°	1589.4	1567.1	1444.7	1357.0	1336.1
15°	1561.6	1514.3	1362.5	1251.2	1217.8
17.5°	1532.3	1460.0	1274.9	1135.7	1089.8
20°	1498.9	1394.6	1178.8	1020.2	967.3
22.5°	1461.4	1331.9	1082.8	908.8	853.2
25°	1416.8	1265.1	982.6	801.7	744.6
27.5°	1373.7	1196.9	886.6	707.0	648.6
30°	1325.0	1123.2	793.3	616.6	555.3
32.5°	1276.3	1048.0	707.0	530.3	484.3
35°	1224.8	971.5	627.7	467.6	441.2
37.5°	1171.9	896.3	552.5	425.9	402.2
40°	1117.6	821.1	476.0	385.5	367.4
42.5°	1061.9	747.4	423.1	352.1	335.4
45°	1004.9	676.4	384.1	317.3	303.4
47.5°	943.6	605.4	346.6	288.1	275.6
50°	886.6	537.2	309.0	261.7	251.9
52.5°	825.3	470.4	278.4	238.0	229.6
55°	764.1	406.4	249.1	215.7	208.8
57.5°	704.2	345.2	221.3	194.8	189.3
60°	643.0	296.4	197.6	175.4	169.8
62.5°	580.4	257.5	175.4	157.3	151.7
65°	517.7	221.3	153.1	139.2	135.0
67.5°	452.3	186.5	133.6	122.5	119.7
70°	388.3	155.9	115.5	105.8	103.0
72.5°	325.7	126.7	97.4	90.5	87.7
75°	260.3	101.6	79.3	75.2	73.8
77.5°	203.2	79.3	64.0	61.2	59.8
80°	148.9	58.5	50.1	47.3	45.9
82.5°	98.8	40.4	36.2	34.8	33.4
85°	51.5	25.1	22.3	22.3	20.9
87.5°	16.7	11.1	11.1	11.1	9.7
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	21.60	23.07	21.96	23.38	23.70	16.40	17.87	16.77	18.19	18.50
	3H	23.93	25.25	24.31	25.57	25.94	18.05	19.37	18.43	19.70	20.06
	4H	24.82	26.06	25.23	26.41	26.79	18.69	19.92	19.09	20.27	20.65
	6H	25.49	26.63	25.90	26.99	27.39	19.18	20.32	19.59	20.69	21.08
	8H	25.69	26.78	26.12	27.17	27.57	19.35	20.44	19.78	20.83	21.23
	12H	25.81	26.85	26.24	27.23	27.66	19.47	20.51	19.90	20.89	21.32
4H	2H	21.62	22.85	22.02	23.20	23.58	17.12	18.35	17.52	18.70	19.08
	3H	24.03	25.05	24.44	25.45	25.86	18.97	19.99	19.38	20.39	20.80
	4H	24.96	25.88	25.39	26.30	26.74	19.72	20.64	20.15	21.06	21.49
	6H	25.74	26.54	26.19	26.98	27.44	20.33	21.13	20.79	21.58	22.04
	8H	26.01	26.76	26.47	27.20	27.67	20.55	21.30	21.01	21.74	22.21
	12H	26.18	26.85	26.67	27.33	27.80	20.71	21.38	21.19	21.86	22.33
8H	4H	24.95	25.70	25.42	26.14	26.61	20.09	20.84	20.56	21.29	21.76
	6H	25.76	26.38	26.26	26.87	27.35	20.83	21.45	21.33	21.94	22.42
	8H	26.06	26.61	26.58	27.12	27.61	21.13	21.68	21.64	22.19	22.68
	12H	26.29	26.78	26.80	27.27	27.84	21.37	21.86	21.88	22.35	22.92
12H	4H	24.93	25.60	25.41	26.08	26.55	20.15	20.82	20.63	21.30	21.77
	6H	25.73	26.29	26.25	26.80	27.29	20.92	21.47	21.43	21.98	22.47
	8H	26.07	26.56	26.58	27.05	27.62	21.27	21.76	21.78	22.26	22.82