

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055412

Luminaire Tested: S122R3DR-H865D950-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055412
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-H865D950-X4F0-XX-UDD-FLL-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

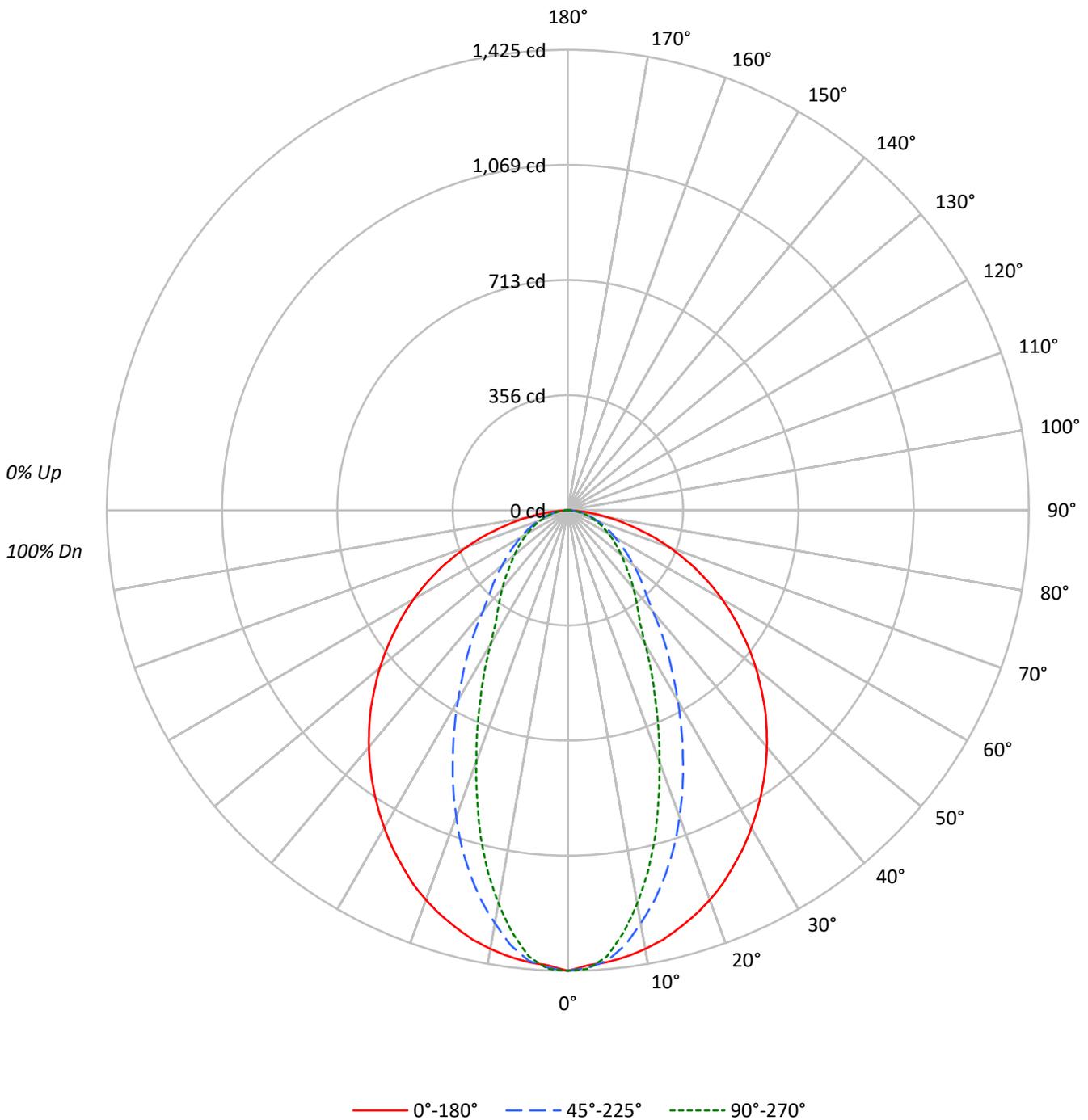
Lumens per Lamp: N/A
Luminaire Lumens: 2155.2 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	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°	26996	26996	26996
5°	26692	26601	26352
10°	26518	24960	23769
15°	26218	22878	20448
20°	25870	20345	16694
25°	25353	17583	13324
30°	24813	14857	10400
35°	24248	12427	8736
40°	23661	10078	7778
45°	23048	8810	6958
50°	22368	7796	6355
55°	21606	7046	5903
60°	20856	6411	5509
65°	19869	5877	5182
70°	18413	5478	4886
75°	16309	4970	4619
80°	13911	4681	4288
85°	9586	4152	3891

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	6.1
10°-20°	329.7	15.3
20°-30°	406.2	18.8
30°-40°	389.7	18.1
40°-50°	336.2	15.6
50°-60°	260.8	12.1
60°-70°	178.6	8.3
70°-80°	96.9	4.5
80°-90°	26.6	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°	866.5	40.2
0°-40°	1256.2	58.3
0°-60°	1853.2	86.0
0°-90°	2155.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2155.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1425	1425	1425	1425	1425	
5°	1404	1424	1399	1381	1386	133
15°	1337	1296	1166	1071	1042	377
25°	1213	1083	841	686	637	559
35°	1048	832	537	400	378	656
45°	860	579	329	272	260	663
55°	654	348	213	185	179	585
65°	443	189	131	119	116	438
75°	223	87	68	64	63	239
85°	44	21	19	19	18	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1424.9	1424.9	1424.9	1424.9	1424.9
2.5°	1409.4	1433.3	1416.6	1416.6	1420.1
5°	1403.5	1423.7	1398.7	1380.8	1385.6
7.5°	1392.7	1407.0	1357.0	1318.9	1317.7
10°	1378.4	1379.6	1297.4	1247.4	1235.5
12.5°	1360.6	1341.5	1236.7	1161.6	1143.7
15°	1336.7	1296.2	1166.4	1071.1	1042.5
17.5°	1311.7	1249.8	1091.3	972.2	932.9
20°	1283.1	1193.8	1009.1	873.3	828.0
22.5°	1251.0	1140.2	926.9	778.0	730.3
25°	1212.8	1083.0	841.1	686.2	637.4
27.5°	1175.9	1024.6	758.9	605.2	555.2
30°	1134.2	961.5	679.1	527.8	475.4
32.5°	1092.5	897.1	605.2	453.9	414.6
35°	1048.4	831.6	537.3	400.3	377.7
37.5°	1003.2	767.3	473.0	364.6	344.3
40°	956.7	702.9	407.5	330.0	314.5
42.5°	909.0	639.8	362.2	301.4	287.1
45°	860.2	579.0	328.8	271.6	259.7
47.5°	807.8	518.3	296.7	246.6	235.9
50°	758.9	459.9	264.5	224.0	215.6
52.5°	706.5	402.7	238.3	203.7	196.6
55°	654.1	347.9	213.3	184.7	178.7
57.5°	602.8	295.5	189.4	166.8	162.0
60°	550.4	253.8	169.2	150.1	145.4
62.5°	496.8	220.4	150.1	134.6	129.9
65°	443.2	189.4	131.1	119.1	115.6
67.5°	387.2	159.6	114.4	104.8	102.5
70°	332.4	133.4	98.9	90.5	88.2
72.5°	278.8	108.4	83.4	77.4	75.1
75°	222.8	87.0	67.9	64.3	63.1
77.5°	173.9	67.9	54.8	52.4	51.2
80°	127.5	50.0	42.9	40.5	39.3
82.5°	84.6	34.6	31.0	29.8	28.6
85°	44.1	21.4	19.1	19.1	17.9
87.5°	14.3	9.5	9.5	9.5	8.3
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	21.06	22.53	21.42	22.84	23.16	15.86	17.33	16.23	17.65	17.96
	3H	23.39	24.71	23.77	25.03	25.40	17.51	18.83	17.89	19.16	19.52
	4H	24.28	25.52	24.68	25.87	26.25	18.15	19.38	18.55	19.73	20.11
	6H	24.95	26.09	25.36	26.45	26.85	18.64	19.78	19.05	20.15	20.54
	8H	25.15	26.24	25.58	26.63	27.03	18.81	19.89	19.24	20.28	20.69
	12H	25.27	26.31	25.70	26.69	27.12	18.93	19.96	19.36	20.35	20.78
4H	2H	21.08	22.31	21.48	22.66	23.04	16.58	17.82	16.98	18.16	18.54
	3H	23.49	24.51	23.90	24.91	25.31	18.43	19.45	18.84	19.85	20.26
	4H	24.42	25.34	24.85	25.76	26.20	19.17	20.10	19.61	20.51	20.95
	6H	25.20	26.00	25.65	26.44	26.90	19.79	20.59	20.25	21.03	21.50
	8H	25.47	26.22	25.93	26.66	27.13	20.01	20.76	20.47	21.20	21.67
	12H	25.64	26.31	26.13	26.79	27.26	20.17	20.84	20.65	21.32	21.79
8H	4H	24.41	25.16	24.88	25.60	26.07	19.55	20.30	20.02	20.75	21.22
	6H	25.22	25.84	25.72	26.33	26.81	20.29	20.91	20.79	21.40	21.88
	8H	25.52	26.07	26.04	26.58	27.07	20.59	21.14	21.10	21.65	22.14
	12H	25.75	26.24	26.26	26.73	27.30	20.83	21.32	21.34	21.81	22.38
12H	4H	24.39	25.06	24.87	25.54	26.01	19.61	20.28	20.09	20.76	21.23
	6H	25.19	25.75	25.71	26.26	26.75	20.38	20.93	20.89	21.44	21.93
	8H	25.53	26.02	26.04	26.51	27.08	20.73	21.22	21.24	21.72	22.28