

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: P1055149

Luminaire Tested: S122R3DR-S1005D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055149
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D840-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

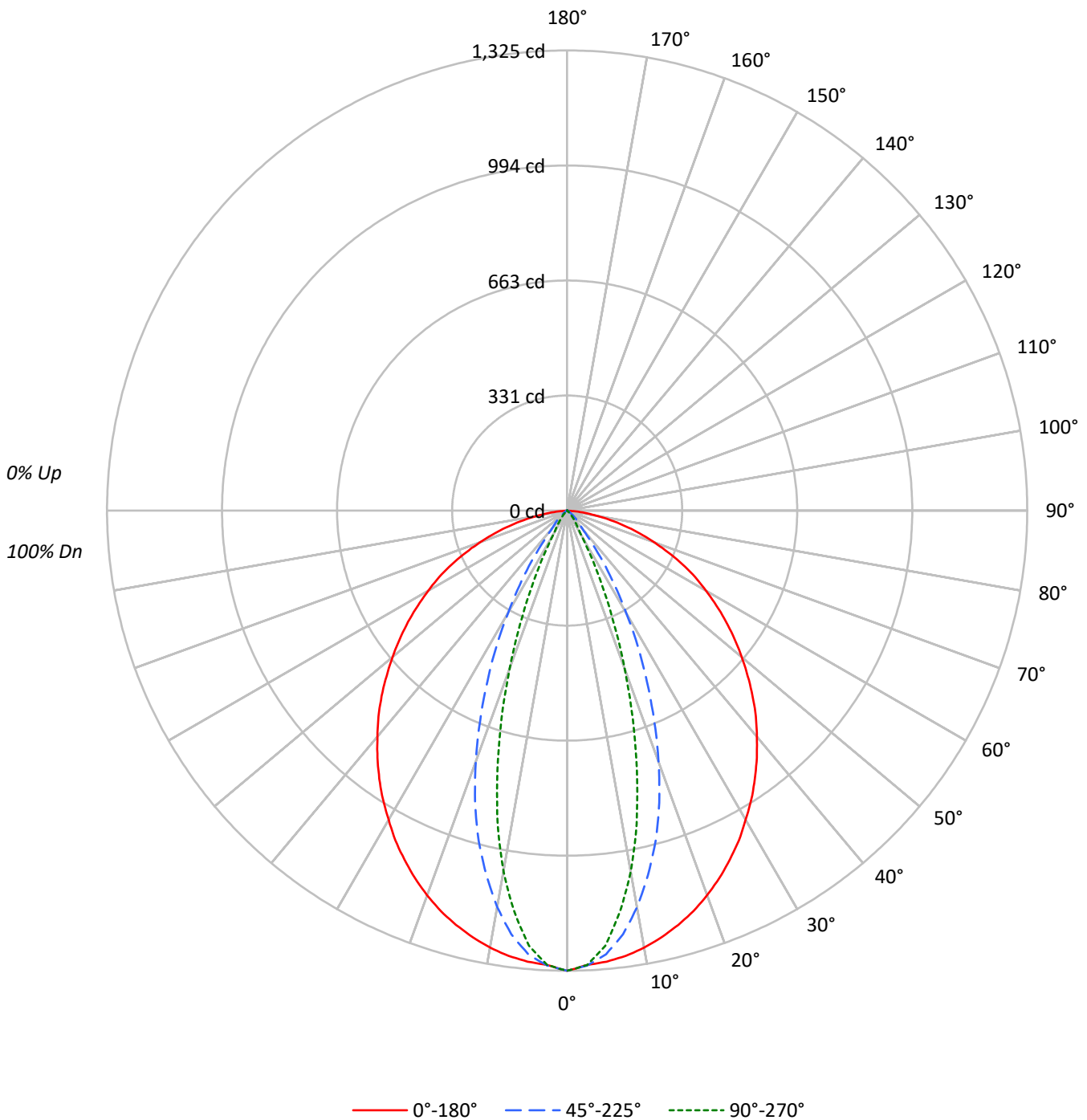
Lumens per Lamp: N/A
Luminaire Lumens: 1205.5 lumens
Efficiency: N/A
Efficacy: 28.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	112	109	106	103	110	106	104	101	102	100	98		99	97	95		95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78		84	80	77		82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70		78	73	70		76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64		72	68	64		71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59		68	63	59		66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55		63	58	54		62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51		60	54	50		59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47		56	51	47		55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44		53	48	44		52	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25103	25103	25103
5°	24794	24389	23925
10°	24582	22297	20306
15°	24227	19298	15205
20°	23767	15506	9734
25°	23179	11366	4998
30°	22492	7429	1632
35°	21806	4122	951
40°	21020	1657	527
45°	20240	1101	204
50°	19347	628	88
55°	18464	301	50
60°	17487	114	0
65°	16457	67	0
70°	14762	83	0
75°	12708	110	0
80°	9634	0	0
85°	3978	326	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20240 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.8	9.9
10°-20°	276.0	22.9
20°-30°	280.2	23.2
30°-40°	210.3	17.4
40°-50°	147.2	12.2
50°-60°	90.1	7.5
60°-70°	53.7	4.5
70°-80°	24.7	2.1
80°-90°	4.4	0.4
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°	675.0	56.0
0°-40°	885.3	73.4
0°-60°	1122.6	93.1
0°-90°	1205.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1205.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1325	1325	1325	1325	1325	
5°	1304	1316	1282	1258	1258	124
15°	1235	1168	984	833	775	348
25°	1109	914	544	311	239	510
35°	943	614	178	53	41	589
45°	755	324	41	12	8	582
55°	559	99	9	3	2	500
65°	367	29	2	2	0	362
75°	174	3	2	2	0	184
85°	18	0	2	2	0	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1325.0	1325.0	1325.0	1325.0	1325.0
2.5°	1309.8	1329.6	1311.3	1308.3	1309.8
5°	1303.7	1315.9	1282.4	1258.0	1258.0
7.5°	1293.1	1293.1	1230.6	1180.4	1165.1
10°	1277.8	1261.1	1159.0	1078.3	1055.5
12.5°	1258.0	1218.4	1075.3	961.0	924.5
15°	1235.2	1168.2	983.9	833.1	775.2
17.5°	1209.3	1111.8	881.8	694.5	627.5
20°	1178.8	1050.9	769.1	552.9	482.8
22.5°	1145.3	983.9	654.9	426.5	351.8
25°	1108.8	913.8	543.7	310.7	239.1
27.5°	1070.7	840.7	441.7	213.2	146.2
30°	1028.1	764.6	339.6	126.4	74.6
32.5°	986.9	691.5	254.3	68.5	54.8
35°	942.8	613.8	178.2	53.3	41.1
37.5°	897.1	540.7	109.7	39.6	30.5
40°	849.9	466.1	67.0	28.9	21.3
42.5°	804.2	396.0	53.3	19.8	13.7
45°	755.4	324.4	41.1	12.2	7.6
47.5°	705.2	258.9	30.5	7.6	4.6
50°	656.4	201.0	21.3	4.6	3.0
52.5°	607.7	147.7	13.7	3.0	1.5
55°	559.0	99.0	9.1	3.0	1.5
57.5°	510.2	70.1	6.1	1.5	1.5
60°	461.5	54.8	3.0	1.5	0.0
62.5°	415.8	42.6	3.0	1.5	1.5
65°	367.1	28.9	1.5	1.5	0.0
67.5°	315.3	18.3	1.5	1.5	0.0
70°	266.5	10.7	1.5	1.5	0.0
72.5°	219.3	6.1	1.5	1.5	0.0
75°	173.6	3.0	1.5	1.5	0.0
77.5°	129.5	1.5	0.0	1.5	0.0
80°	88.3	0.0	0.0	1.5	0.0
82.5°	51.8	0.0	0.0	1.5	0.0
85°	18.3	0.0	1.5	1.5	0.0
87.5°	0.0	0.0	1.5	1.5	0.0
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	17.41	18.67	17.78	18.98	19.30	0.00	0.00	0.00	0.00	0.00
	3H	21.15	22.27	21.53	22.60	22.97	0.00	0.00	0.00	0.00	0.00
	4H	22.46	23.50	22.87	23.85	24.24	0.00	0.00	0.00	0.00	0.00
	6H	23.32	24.27	23.73	24.64	25.04	0.00	0.00	0.00	0.00	0.00
	8H	23.53	24.43	23.96	24.83	25.23	0.00	0.00	0.00	0.00	0.00
	12H	23.59	24.46	24.03	24.84	25.27	0.00	0.00	0.00	0.00	0.00
4H	2H	17.16	18.21	17.57	18.56	18.94	0.00	0.00	0.00	0.00	0.00
	3H	20.91	21.76	21.32	22.16	22.57	0.00	0.00	0.00	0.00	0.00
	4H	22.20	22.96	22.64	23.38	23.83	0.00	0.00	0.00	0.00	0.00
	6H	23.12	23.78	23.58	24.22	24.69	0.00	0.00	0.00	0.00	0.00
	8H	23.38	23.99	23.85	24.44	24.91	0.00	0.00	0.00	0.00	0.00
	12H	23.48	24.02	23.97	24.50	24.98	0.00	0.00	0.00	0.00	0.00
8H	4H	22.06	22.67	22.53	23.12	23.59	0.00	0.00	0.00	0.00	0.00
	6H	22.96	23.45	23.46	23.95	24.43	0.00	0.00	0.00	0.00	0.00
	8H	23.21	23.66	23.74	24.18	24.67	0.00	0.00	0.00	0.00	0.00
	12H	23.33	23.72	23.85	24.22	24.79	0.00	0.00	0.00	0.00	0.00
12H	4H	22.01	22.55	22.49	23.03	23.50	0.00	0.00	0.00	0.00	0.00
	6H	22.89	23.34	23.42	23.85	24.35	0.00	0.00	0.00	0.00	0.00
	8H	23.17	23.56	23.69	24.05	24.63	0.00	0.00	0.00	0.00	0.00