

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: P1055145

Luminaire Tested: S122R3DR-S1005D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055145
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-S1005D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

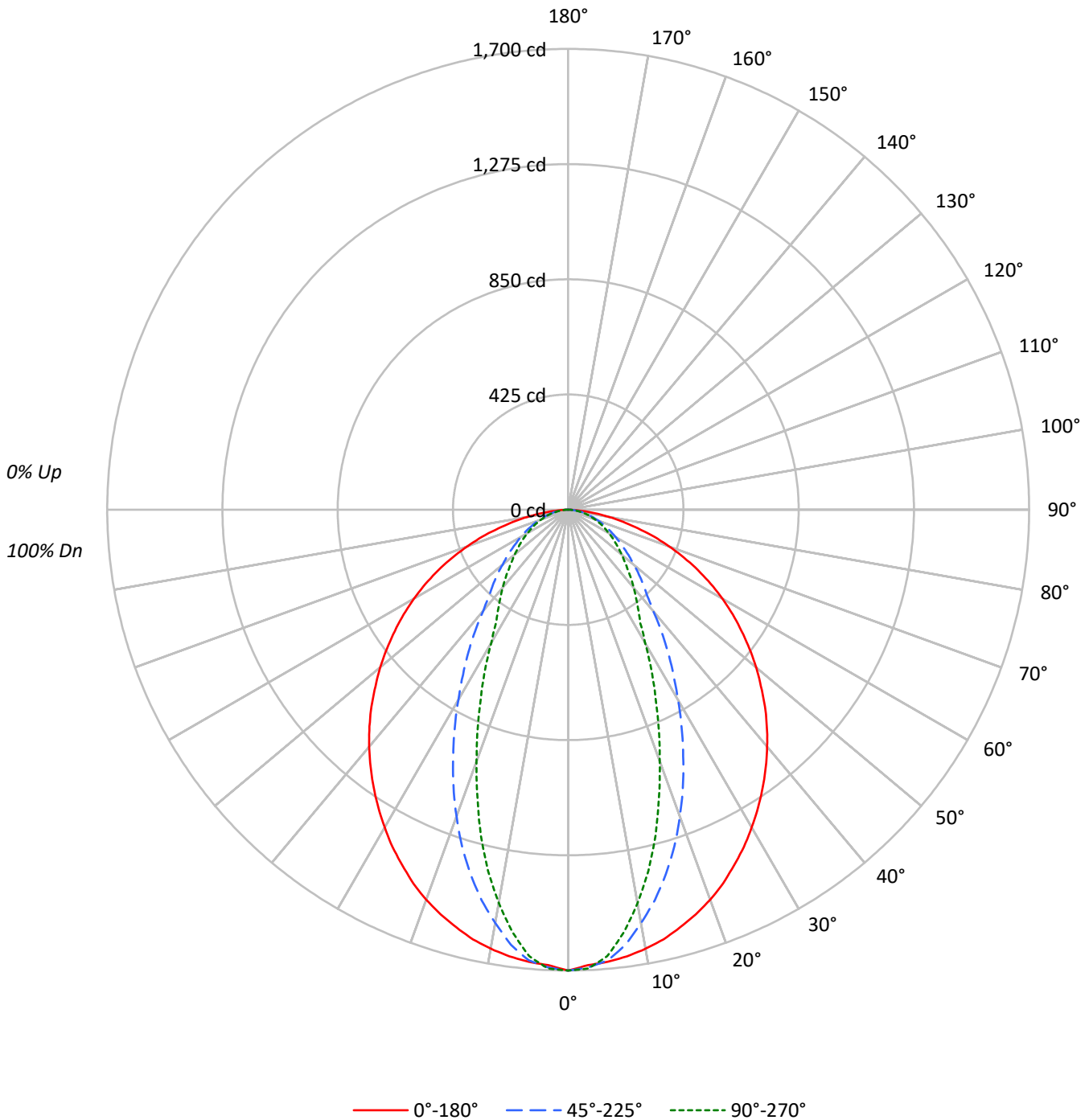
Lumens per Lamp: N/A
Luminaire Lumens: 2571.5 lumens
Efficiency: N/A
Efficacy: 61.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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°	32210	32210	32210
5°	31846	31738	31441
10°	31641	29781	28359
15°	31283	27295	24396
20°	30868	24275	19918
25°	30251	20980	15898
30°	29606	17727	12409
35°	28932	14828	10422
40°	28232	12025	9282
45°	27498	10511	8303
50°	26689	9302	7584
55°	25777	8403	7042
60°	24883	7650	6570
65°	23706	7011	6182
70°	21969	6536	5827
75°	19457	5929	5512
80°	16595	5586	5117
85°	11434	4935	4630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 27498 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	6.1
10°-20°	393.3	15.3
20°-30°	484.7	18.8
30°-40°	465.0	18.1
40°-50°	401.1	15.6
50°-60°	311.2	12.1
60°-70°	213.1	8.3
70°-80°	115.7	4.5
80°-90°	31.7	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°	1033.8	40.2
0°-40°	1498.8	58.3
0°-60°	2211.1	86.0
0°-90°	2571.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2571.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1674	1699	1669	1648	1653	159
15°	1595	1547	1392	1278	1244	450
25°	1447	1292	1004	819	760	667
35°	1251	992	641	478	451	782
45°	1026	691	392	324	310	791
55°	780	415	254	220	213	698
65°	529	226	156	142	138	522
75°	266	104	81	77	75	285
85°	53	26	23	23	21	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1700.1	1700.1	1700.1	1700.1	1700.1
2.5°	1681.6	1710.1	1690.2	1690.2	1694.4
5°	1674.5	1698.7	1668.8	1647.5	1653.2
7.5°	1661.7	1678.8	1619.1	1573.6	1572.2
10°	1644.7	1646.1	1548.0	1488.3	1474.1
12.5°	1623.4	1600.6	1475.5	1386.0	1364.6
15°	1594.9	1546.6	1391.6	1277.9	1243.8
17.5°	1565.1	1491.2	1302.1	1159.9	1113.0
20°	1531.0	1424.3	1204.0	1042.0	987.9
22.5°	1492.6	1360.4	1105.9	928.2	871.4
25°	1447.1	1292.1	1003.6	818.8	760.5
27.5°	1403.0	1222.5	905.5	722.1	662.4
30°	1353.3	1147.1	810.3	629.7	567.2
32.5°	1303.5	1070.4	722.1	541.6	494.7
35°	1250.9	992.2	641.1	477.6	450.6
37.5°	1196.9	915.4	564.3	435.0	410.8
40°	1141.5	838.7	486.2	393.8	375.3
42.5°	1084.6	763.3	432.1	359.6	342.6
45°	1026.3	690.8	392.3	324.1	309.9
47.5°	963.8	618.4	354.0	294.3	281.5
50°	905.5	548.7	315.6	267.2	257.3
52.5°	842.9	480.5	284.3	243.1	234.5
55°	780.4	415.1	254.4	220.3	213.2
57.5°	719.3	352.5	226.0	199.0	193.3
60°	656.7	302.8	201.9	179.1	173.4
62.5°	592.8	263.0	179.1	160.6	154.9
65°	528.8	226.0	156.4	142.1	137.9
67.5°	462.0	190.5	136.5	125.1	122.2
70°	396.6	159.2	118.0	108.0	105.2
72.5°	332.6	129.4	99.5	92.4	89.6
75°	265.8	103.8	81.0	76.8	75.3
77.5°	207.5	81.0	65.4	62.5	61.1
80°	152.1	59.7	51.2	48.3	46.9
82.5°	100.9	41.2	37.0	35.5	34.1
85°	52.6	25.6	22.7	22.7	21.3
87.5°	17.1	11.4	11.4	11.4	10.0
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	21.67	23.14	22.04	23.45	23.77	16.48	17.95	16.84	18.26	18.57
	3H	24.00	25.32	24.38	25.65	26.01	18.13	19.44	18.50	19.77	20.13
	4H	24.90	26.13	25.30	26.48	26.86	18.76	19.99	19.16	20.34	20.72
	6H	25.56	26.70	25.97	27.07	27.46	19.25	20.39	19.67	20.76	21.15
	8H	25.77	26.85	26.20	27.24	27.64	19.42	20.51	19.85	20.90	21.30
	12H	25.88	26.92	26.31	27.30	27.73	19.54	20.58	19.97	20.96	21.39
4H	2H	21.69	22.92	22.09	23.27	23.65	17.19	18.43	17.59	18.78	19.16
	3H	24.10	25.13	24.51	25.53	25.93	19.04	20.07	19.45	20.47	20.87
	4H	25.03	25.95	25.46	26.37	26.81	19.79	20.71	20.22	21.13	21.57
	6H	25.81	26.61	26.27	27.05	27.51	20.40	21.21	20.86	21.65	22.11
	8H	26.08	26.83	26.54	27.27	27.74	20.62	21.37	21.08	21.81	22.28
	12H	26.26	26.92	26.74	27.40	27.88	20.78	21.45	21.26	21.93	22.40
8H	4H	25.02	25.77	25.49	26.22	26.69	20.17	20.92	20.63	21.36	21.83
	6H	25.83	26.45	26.33	26.94	27.42	20.91	21.52	21.40	22.02	22.49
	8H	26.13	26.69	26.65	27.20	27.69	21.20	21.75	21.72	22.26	22.75
	12H	26.36	26.85	26.87	27.35	27.91	21.44	21.93	21.95	22.43	22.99
12H	4H	25.00	25.67	25.49	26.15	26.62	20.22	20.89	20.71	21.37	21.84
	6H	25.81	26.36	26.32	26.87	27.36	20.99	21.55	21.51	22.06	22.55
	8H	26.14	26.63	26.65	27.12	27.69	21.35	21.84	21.86	22.33	22.89