

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: P1055550

Luminaire Tested: S123R3DR-S1000D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D830-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

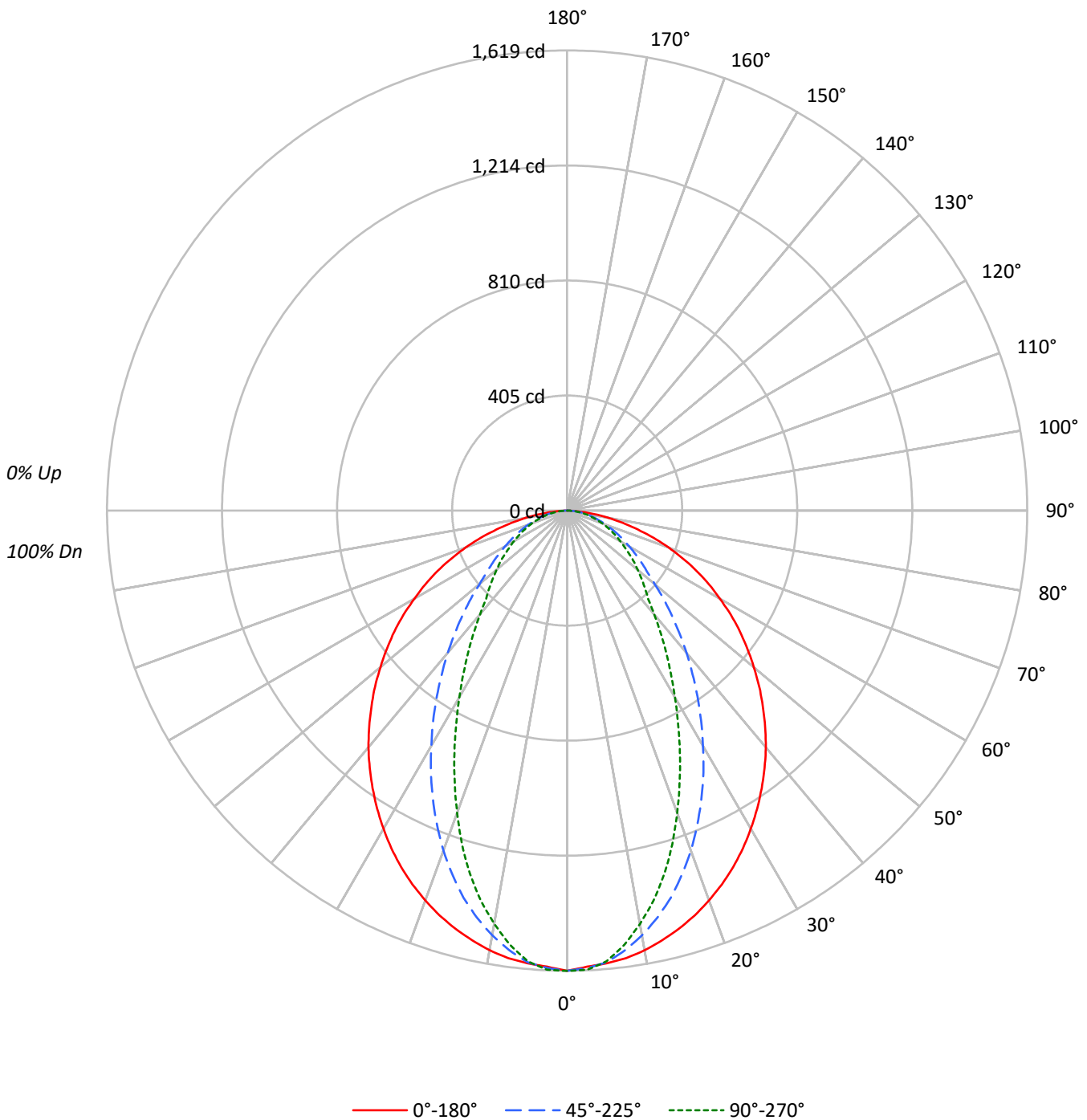
Lumens per Lamp: N/A
Luminaire Lumens: 2840.2 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	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	107	104	100	97	99	97	94	96	93	91	92	90	88	86																												
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74																												
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65																												
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57																												
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50																												
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																												
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																												
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37																												
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																												
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19524	19524	19524
5°	19349	19306	19262
10°	19233	18580	18076
15°	19003	17598	16510
20°	18726	16333	14515
25°	18400	14872	12487
30°	17992	13305	10555
35°	17560	11766	8913
40°	17119	10276	7492
45°	16604	8859	6609
50°	16084	7542	6066
55°	15607	6722	5602
60°	14952	6074	5228
65°	14341	5563	4907
70°	13363	5122	4611
75°	11962	4737	4346
80°	10262	4374	4034
85°	7207	4025	3859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16604 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	5.3
10°-20°	397.2	14.0
20°-30°	523.2	18.4
30°-40°	531.0	18.7
40°-50°	461.6	16.3
50°-60°	361.6	12.7
60°-70°	245.7	8.7
70°-80°	133.2	4.7
80°-90°	36.7	1.3
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°	1070.5	37.7
0°-40°	1601.5	56.4
0°-60°	2424.7	85.4
0°-90°	2840.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2840.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1619	1619	1619	1619	1619	
5°	1599	1618	1595	1581	1592	152
15°	1522	1501	1410	1341	1323	429
25°	1383	1300	1118	979	939	637
35°	1193	1051	799	647	606	746
45°	974	781	520	401	388	752
55°	742	516	320	272	266	663
65°	503	279	195	174	172	496
75°	257	128	102	94	93	274
85°	52	32	29	27	28	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1619.4	1619.4	1619.4	1619.4	1619.4
2.5°	1606.1	1626.7	1610.9	1612.1	1617.0
5°	1598.8	1618.2	1595.2	1580.7	1591.6
7.5°	1587.9	1602.5	1560.1	1537.0	1540.7
10°	1571.0	1575.8	1517.7	1481.3	1476.5
12.5°	1547.9	1539.5	1466.8	1413.5	1405.0
15°	1522.5	1500.7	1409.9	1340.8	1322.7
17.5°	1493.4	1457.1	1343.3	1258.5	1230.6
20°	1459.5	1408.7	1273.0	1165.2	1131.3
22.5°	1423.2	1357.8	1196.7	1069.5	1034.4
25°	1383.2	1299.6	1118.0	978.7	938.7
27.5°	1339.6	1241.5	1038.0	889.0	844.2
30°	1292.4	1180.9	955.7	801.8	758.2
32.5°	1243.9	1116.8	876.9	720.7	678.3
35°	1193.1	1051.3	799.4	646.8	605.6
37.5°	1141.0	984.7	724.3	576.5	537.8
40°	1087.7	916.9	652.9	511.1	476.0
42.5°	1030.8	849.1	583.8	449.4	422.7
45°	973.8	781.2	519.6	400.9	387.6
47.5°	916.9	712.2	459.1	367.0	354.9
50°	857.5	645.6	402.1	335.5	323.4
52.5°	799.4	580.2	354.9	305.2	296.8
55°	742.5	516.0	319.8	272.5	266.5
57.5°	683.1	453.0	284.6	247.1	239.8
60°	620.1	392.4	251.9	220.4	216.8
62.5°	563.2	335.5	222.9	197.4	193.8
65°	502.7	278.6	195.0	174.4	172.0
67.5°	440.9	231.3	169.6	152.6	151.4
70°	379.1	195.0	145.3	132.0	130.8
72.5°	318.6	161.1	122.3	113.9	111.4
75°	256.8	128.4	101.7	94.5	93.3
77.5°	201.1	99.3	81.2	76.3	75.1
80°	147.8	73.9	63.0	59.4	58.1
82.5°	96.9	50.9	44.8	42.4	42.4
85°	52.1	31.5	29.1	26.6	27.9
87.5°	18.2	13.3	13.3	12.1	13.3
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	20.88	22.37	21.25	22.69	23.00	16.03	17.52	16.40	17.84	18.15
	3H	22.77	24.11	23.15	24.44	24.80	17.66	19.00	18.04	19.33	19.69
	4H	23.53	24.78	23.93	25.13	25.51	18.30	19.55	18.70	19.90	20.28
	6H	24.09	25.25	24.50	25.62	26.01	18.79	19.95	19.20	20.31	20.71
	8H	24.26	25.37	24.69	25.76	26.16	18.96	20.06	19.38	20.45	20.85
	12H	24.36	25.42	24.79	25.80	26.23	19.08	20.14	19.51	20.52	20.95
4H	2H	20.93	22.18	21.33	22.53	22.91	16.76	18.02	17.16	18.36	18.74
	3H	22.95	23.99	23.36	24.39	24.79	18.58	19.62	18.99	20.02	20.43
	4H	23.76	24.70	24.20	25.12	25.56	19.33	20.27	19.76	20.68	21.12
	6H	24.45	25.26	24.90	25.71	26.17	19.94	20.75	20.39	21.20	21.66
	8H	24.68	25.44	25.14	25.88	26.35	20.15	20.91	20.61	21.36	21.83
	12H	24.83	25.51	25.31	25.99	26.46	20.32	21.00	20.80	21.48	21.95
8H	4H	23.79	24.55	24.25	25.00	25.46	19.71	20.47	20.17	20.92	21.39
	6H	24.52	25.15	25.01	25.64	26.12	20.44	21.07	20.94	21.56	22.04
	8H	24.79	25.35	25.30	25.86	26.35	20.73	21.29	21.24	21.80	22.29
	12H	25.00	25.50	25.51	25.99	26.55	20.97	21.47	21.48	21.96	22.53
12H	4H	23.77	24.45	24.26	24.93	25.41	19.77	20.45	20.25	20.93	21.40
	6H	24.50	25.07	25.02	25.58	26.07	20.52	21.09	21.04	21.60	22.09
	8H	24.81	25.31	25.32	25.80	26.36	20.87	21.37	21.38	21.86	22.43