

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: P1055688

Luminaire Tested: S123R3DR-H1000D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055688  
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-H1000D835-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

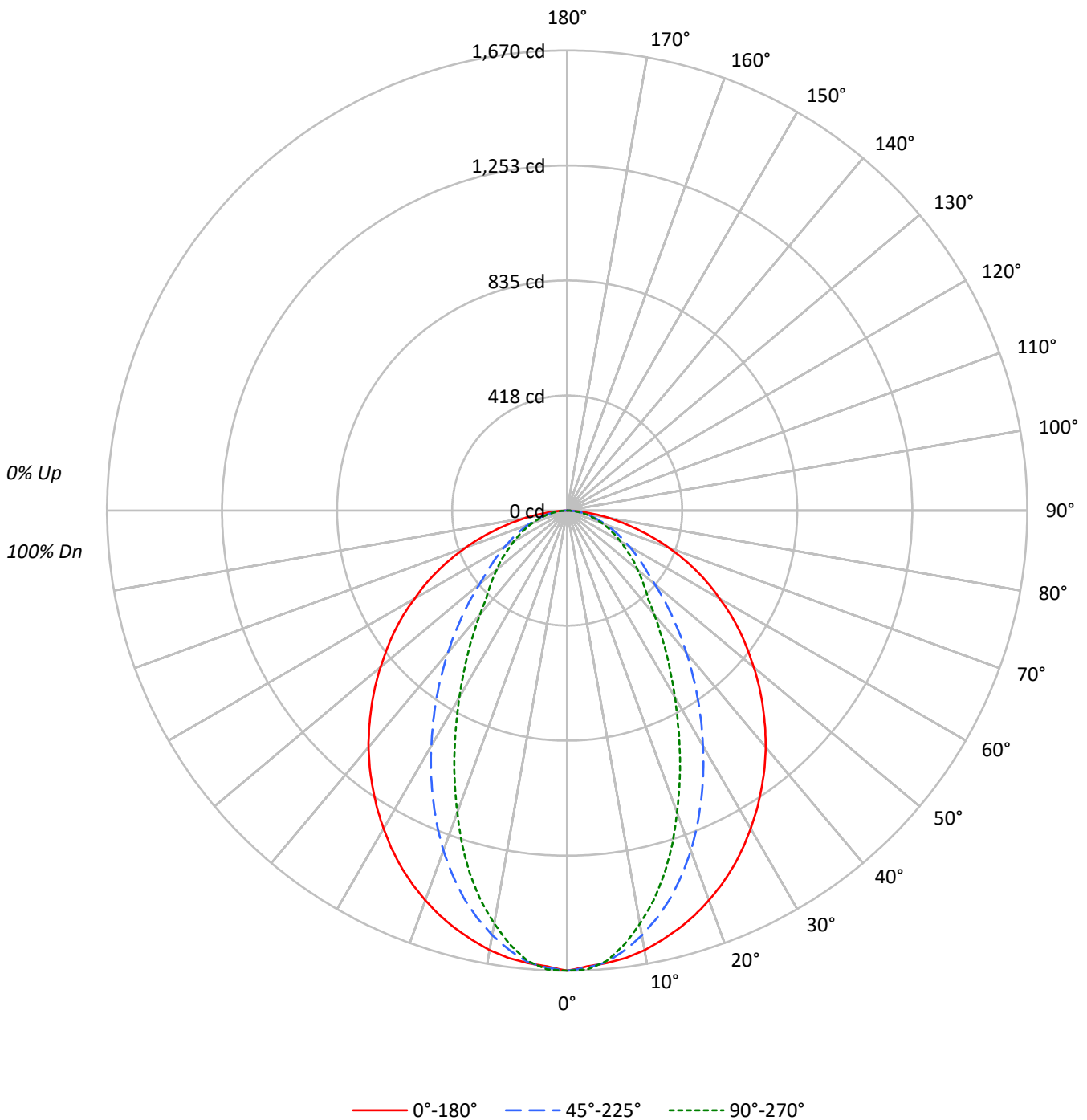
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2928.4 lumens  
Efficiency: N/A  
Efficacy: 94.8 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): 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	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°	20131	20131	20131
5°	19951	19905	19860
10°	19830	19157	18637
15°	19594	18145	17021
20°	19308	16840	14965
25°	18972	15334	12876
30°	18550	13717	10884
35°	18105	12131	9190
40°	17651	10594	7724
45°	17120	9136	6813
50°	16584	7776	6253
55°	16091	6930	5774
60°	15418	6265	5389
65°	14786	5737	5058
70°	13779	5284	4755
75°	12335	4886	4481
80°	10581	4506	4159
85°	7428	4150	3970

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17120 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.8	5.3
10°-20°	409.5	14.0
20°-30°	539.4	18.4
30°-40°	547.5	18.7
40°-50°	475.9	16.3
50°-60°	372.9	12.7
60°-70°	253.3	8.7
70°-80°	137.3	4.7
80°-90°	37.8	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°	1103.7	37.7
0°-40°	1651.2	56.4
0°-60°	2500.0	85.4
0°-90°	2928.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2928.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1670	1670	1670	1670	1670	
5°	1648	1668	1645	1630	1641	157
15°	1570	1547	1454	1382	1364	443
25°	1426	1340	1153	1009	968	656
35°	1230	1084	824	667	624	769
45°	1004	806	536	413	400	775
55°	766	532	330	281	275	683
65°	518	287	201	180	177	512
75°	265	132	105	97	96	283
85°	54	32	30	28	29	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1669.7	1669.7	1669.7	1669.7	1669.7
2.5°	1656.0	1677.2	1661.0	1662.2	1667.2
5°	1648.5	1668.5	1644.7	1629.7	1641.0
7.5°	1637.2	1652.2	1608.5	1584.8	1588.5
10°	1619.8	1624.7	1564.8	1527.3	1522.3
12.5°	1596.0	1587.3	1512.4	1457.4	1448.7
15°	1569.8	1547.3	1453.7	1382.5	1363.7
17.5°	1539.8	1502.4	1385.0	1297.5	1268.8
20°	1504.9	1452.4	1312.5	1201.4	1166.4
22.5°	1467.4	1400.0	1233.9	1102.7	1066.5
25°	1426.2	1340.0	1152.7	1009.1	967.9
27.5°	1381.2	1280.1	1070.3	916.7	870.4
30°	1332.5	1217.6	985.3	826.7	781.8
32.5°	1282.6	1151.4	904.2	743.1	699.4
35°	1230.1	1084.0	824.2	666.9	624.4
37.5°	1176.4	1015.3	746.8	594.5	554.5
40°	1121.5	945.4	673.1	527.0	490.8
42.5°	1062.8	875.4	601.9	463.3	435.8
45°	1004.1	805.5	535.8	413.4	399.6
47.5°	945.4	734.3	473.3	378.4	365.9
50°	884.2	665.6	414.6	345.9	333.4
52.5°	824.2	598.2	365.9	314.7	306.0
55°	765.5	532.0	329.7	281.0	274.7
57.5°	704.3	467.1	293.5	254.8	247.3
60°	639.4	404.6	259.8	227.3	223.5
62.5°	580.7	345.9	229.8	203.6	199.8
65°	518.3	287.2	201.1	179.8	177.3
67.5°	454.6	238.5	174.8	157.4	156.1
70°	390.9	201.1	149.9	136.1	134.9
72.5°	328.4	166.1	126.1	117.4	114.9
75°	264.8	132.4	104.9	97.4	96.2
77.5°	207.3	102.4	83.7	78.7	77.4
80°	152.4	76.2	64.9	61.2	59.9
82.5°	99.9	52.5	46.2	43.7	43.7
85°	53.7	32.5	30.0	27.5	28.7
87.5°	18.7	13.7	13.7	12.5	13.7
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	20.99	22.48	21.35	22.79	23.11	16.14	17.63	16.50	17.94	18.26
	3H	22.88	24.21	23.25	24.54	24.90	17.77	19.11	18.14	19.43	19.80
	4H	23.63	24.89	24.03	25.24	25.62	18.40	19.66	18.80	20.01	20.39
	6H	24.20	25.36	24.61	25.72	26.12	18.89	20.05	19.30	20.42	20.81
	8H	24.37	25.47	24.80	25.86	26.27	19.06	20.17	19.49	20.56	20.96
	12H	24.47	25.52	24.90	25.91	26.34	19.19	20.24	19.62	20.63	21.06
4H	2H	21.04	22.29	21.44	22.64	23.02	16.87	18.12	17.27	18.47	18.85
	3H	23.05	24.10	23.46	24.50	24.90	18.69	19.73	19.10	20.13	20.53
	4H	23.87	24.81	24.30	25.23	25.66	19.43	20.37	19.87	20.79	21.23
	6H	24.55	25.37	25.01	25.81	26.27	20.04	20.86	20.50	21.30	21.76
	8H	24.78	25.55	25.25	25.99	26.46	20.26	21.02	20.72	21.47	21.93
	12H	24.94	25.62	25.42	26.10	26.57	20.43	21.11	20.91	21.59	22.06
8H	4H	23.89	24.66	24.36	25.10	25.57	19.82	20.58	20.28	21.03	21.49
	6H	24.62	25.25	25.12	25.75	26.22	20.55	21.18	21.04	21.67	22.15
	8H	24.89	25.46	25.41	25.97	26.46	20.83	21.40	21.35	21.91	22.40
	12H	25.10	25.60	25.61	26.09	26.66	21.08	21.58	21.59	22.07	22.64
12H	4H	23.88	24.56	24.36	25.04	25.51	19.87	20.55	20.35	21.03	21.50
	6H	24.61	25.17	25.12	25.68	26.17	20.63	21.19	21.14	21.70	22.19
	8H	24.91	25.41	25.42	25.91	26.47	20.98	21.47	21.49	21.97	22.53