

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: P1055555

Luminaire Tested: S123R3DR-S1000D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S1000D840-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

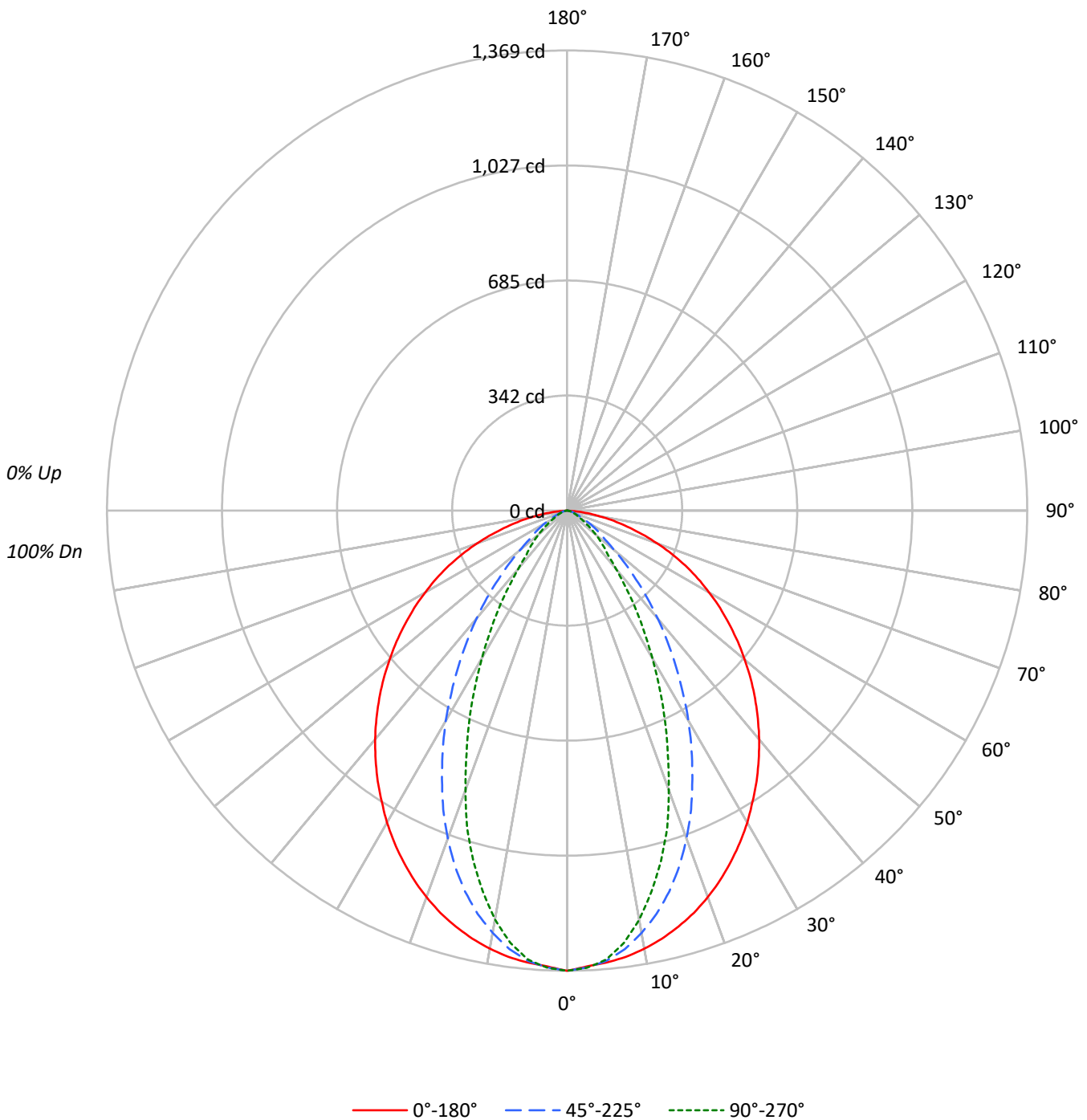
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1904.0 lumens  
Efficiency: N/A  
Efficacy: 54.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
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 (A<sub>in</sub>): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16506	16506	16506
5°	16333	16272	16225
10°	16205	15618	15124
15°	15988	14644	13460
20°	15702	13320	11339
25°	15330	11722	9150
30°	14922	10044	7046
35°	14459	8289	5215
40°	13992	6598	3554
45°	13475	4934	2677
50°	12925	3432	2093
55°	12357	2510	1528
60°	11767	1878	1095
65°	11069	1258	850
70°	10018	917	687
75°	8646	666	545
80°	6936	542	451
85°	3597	539	360

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13475 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.6	6.6
10°-20°	329.4	17.3
20°-30°	413.9	21.7
30°-40°	385.5	20.2
40°-50°	295.1	15.5
50°-60°	196.2	10.3
60°-70°	105.7	5.6
70°-80°	43.3	2.3
80°-90°	8.3	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°	869.9	45.7
0°-40°	1255.4	65.9
0°-60°	1746.7	91.7
0°-90°	1904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1904.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1369	1369	1369	1369	1369	
5°	1350	1364	1344	1339	1341	128
15°	1281	1260	1173	1104	1078	361
25°	1152	1074	881	734	688	531
35°	982	837	563	398	354	614
45°	790	584	289	170	157	610
55°	588	340	119	83	73	527
65°	388	131	44	32	30	383
75°	186	31	14	13	12	199
85°	26	4	4	4	3	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1369.1	1369.1	1369.1	1369.1	1369.1
2.5°	1357.4	1374.3	1360.0	1361.3	1361.3
5°	1349.6	1363.9	1344.5	1339.3	1340.6
7.5°	1339.3	1348.4	1315.9	1299.0	1296.4
10°	1323.7	1326.3	1275.7	1245.8	1235.4
12.5°	1304.2	1295.1	1229.0	1179.6	1160.2
15°	1280.9	1260.1	1173.2	1104.4	1078.4
17.5°	1254.9	1219.9	1109.6	1020.0	988.9
20°	1223.8	1174.5	1038.2	926.6	883.8
22.5°	1190.0	1126.4	962.9	830.6	782.5
25°	1152.4	1074.5	881.2	734.5	687.8
27.5°	1113.5	1018.7	800.7	643.7	595.7
30°	1071.9	961.6	721.5	555.4	506.1
32.5°	1026.5	899.3	639.8	473.7	424.4
35°	982.4	837.0	563.2	398.4	354.3
37.5°	935.7	774.8	489.2	332.2	282.9
40°	889.0	711.2	419.2	267.3	225.8
42.5°	839.6	647.6	353.0	212.8	180.4
45°	790.3	584.0	289.4	170.0	157.0
47.5°	741.0	520.4	233.6	146.6	133.7
50°	689.1	459.4	183.0	124.6	111.6
52.5°	639.8	398.4	142.8	102.5	90.8
55°	587.9	340.0	119.4	83.1	72.7
57.5°	539.9	280.3	98.6	64.9	57.1
60°	488.0	227.1	77.9	50.6	45.4
62.5°	438.6	177.8	59.7	40.2	36.3
65°	388.0	131.1	44.1	32.4	29.8
67.5°	337.4	94.7	33.7	26.0	24.7
70°	284.2	71.4	26.0	20.8	19.5
72.5°	233.6	50.6	19.5	16.9	15.6
75°	185.6	31.1	14.3	13.0	11.7
77.5°	142.8	18.2	10.4	10.4	9.1
80°	99.9	10.4	7.8	7.8	6.5
82.5°	61.0	6.5	5.2	5.2	5.2
85°	26.0	3.9	3.9	3.9	2.6
87.5°	3.9	1.3	1.3	1.3	1.3
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	19.55	20.91	19.92	21.22	21.54	8.13	9.49	8.49	9.80	10.11
	3H	21.31	22.51	21.69	22.84	23.21	8.79	10.00	9.17	10.33	10.69
	4H	22.01	23.13	22.41	23.48	23.86	8.99	10.12	9.39	10.47	10.85
	6H	22.52	23.55	22.93	23.92	24.32	9.11	10.15	9.53	10.52	10.91
	8H	22.66	23.64	23.09	24.03	24.43	9.15	10.13	9.58	10.52	10.92
	12H	22.71	23.65	23.14	24.03	24.46	9.16	10.09	9.59	10.48	10.91
4H	2H	19.36	20.49	19.76	20.84	21.22	8.68	9.81	9.09	10.16	10.54
	3H	21.15	22.08	21.57	22.48	22.88	9.49	10.41	9.90	10.81	11.21
	4H	21.85	22.67	22.28	23.09	23.53	9.74	10.57	10.18	10.99	11.43
	6H	22.42	23.13	22.88	23.58	24.04	9.94	10.65	10.40	11.10	11.56
	8H	22.59	23.26	23.06	23.70	24.17	10.00	10.66	10.46	11.11	11.58
	12H	22.68	23.27	23.17	23.75	24.22	10.03	10.62	10.51	11.10	11.57
8H	4H	21.73	22.39	22.19	22.84	23.31	10.06	10.72	10.53	11.17	11.64
	6H	22.28	22.82	22.78	23.32	23.80	10.31	10.85	10.81	11.34	11.82
	8H	22.46	22.94	22.98	23.46	23.95	10.40	10.88	10.92	11.40	11.89
	12H	22.56	22.99	23.08	23.48	24.05	10.48	10.90	10.99	11.40	11.97
12H	4H	21.68	22.27	22.17	22.75	23.23	10.10	10.69	10.59	11.17	11.65
	6H	22.22	22.71	22.74	23.22	23.71	10.35	10.84	10.87	11.35	11.85
	8H	22.42	22.85	22.93	23.34	23.91	10.48	10.91	10.99	11.40	11.97