

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: P1055570

Luminaire Tested: S123R3DR-S1000D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055570  
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-S1000D940-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, 90 CRI LEDS  
Ballast/Driver: -

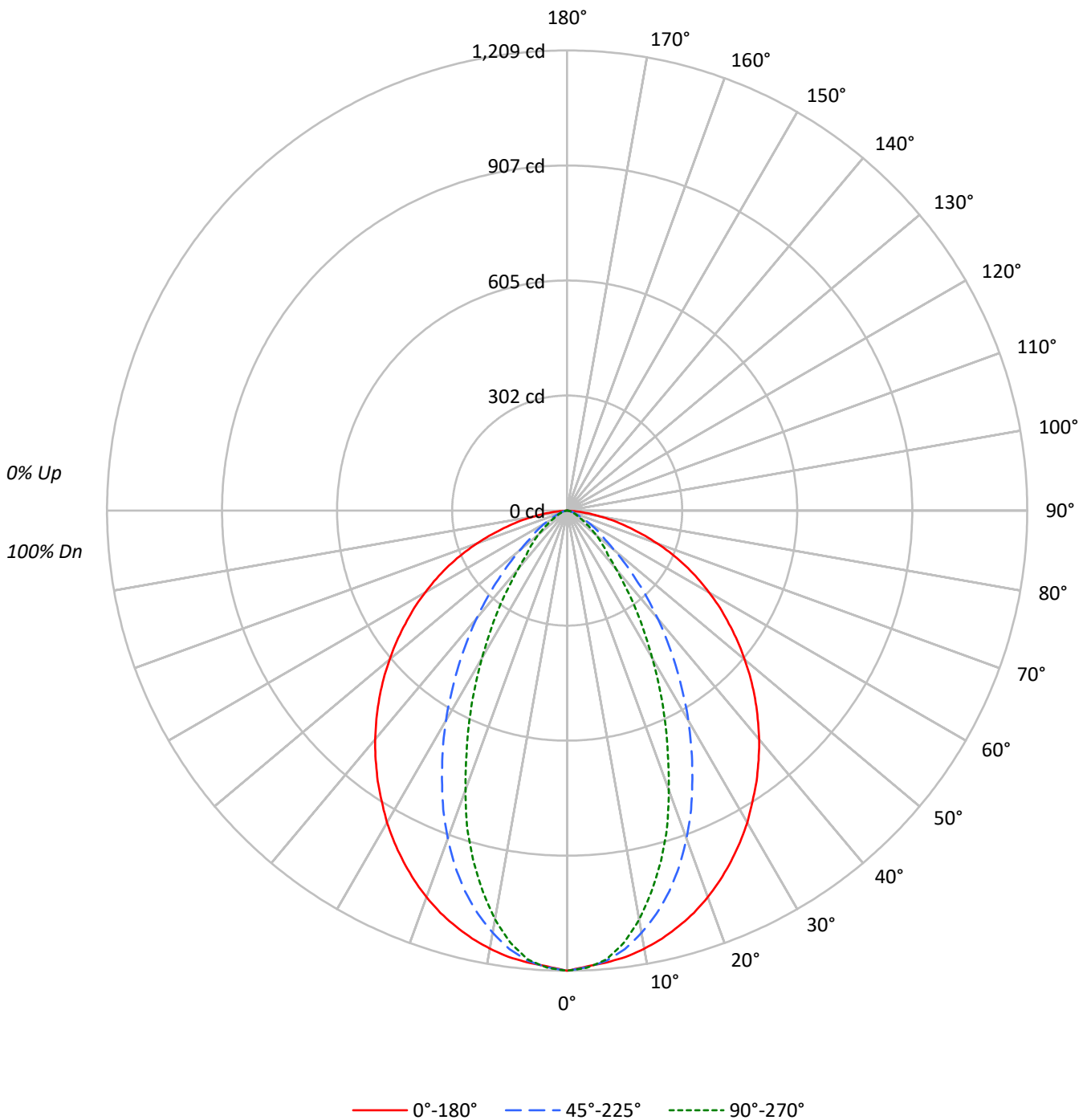
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1681.2 lumens  
Efficiency: N/A  
Efficacy: 48.5 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	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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

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

	0°	45°	90°
0°	14575	14575	14575
5°	14423	14368	14326
10°	14309	13790	13355
15°	14117	12930	11885
20°	13864	11761	10013
25°	13537	10351	8079
30°	13177	8869	6222
35°	12767	7319	4604
40°	12353	5825	3138
45°	11899	4356	2365
50°	11413	3031	1848
55°	10911	2215	1349
60°	10390	1659	967
65°	9774	1113	753
70°	8848	807	606
75°	7635	587	480
80°	6124	479	396
85°	3168	470	318

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11899 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.8	6.6
10°-20°	290.9	17.3
20°-30°	365.5	21.7
30°-40°	340.4	20.2
40°-50°	260.6	15.5
50°-60°	173.2	10.3
60°-70°	93.4	5.6
70°-80°	38.3	2.3
80°-90°	7.3	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°	768.1	45.7
0°-40°	1108.5	65.9
0°-60°	1542.3	91.7
0°-90°	1681.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1681.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1192	1204	1187	1183	1184	113
15°	1131	1113	1036	975	952	319
25°	1018	949	778	649	607	469
35°	867	739	497	352	313	542
45°	698	516	256	150	139	538
55°	519	300	105	73	64	465
65°	343	116	39	29	26	339
75°	164	28	13	12	10	175
85°	23	3	3	3	2	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1208.9	1208.9	1208.9	1208.9	1208.9
2.5°	1198.6	1213.5	1200.9	1202.1	1202.1
5°	1191.7	1204.3	1187.2	1182.6	1183.7
7.5°	1182.6	1190.6	1161.9	1147.0	1144.8
10°	1168.8	1171.1	1126.4	1100.1	1090.9
12.5°	1151.6	1143.6	1085.2	1041.6	1024.4
15°	1131.0	1112.7	1035.9	975.2	952.2
17.5°	1108.1	1077.1	979.7	900.7	873.2
20°	1080.6	1037.0	916.7	818.2	780.4
22.5°	1050.8	994.6	850.3	733.4	691.0
25°	1017.6	948.8	778.1	648.6	607.3
27.5°	983.2	899.5	707.0	568.4	526.0
30°	946.5	849.1	637.1	490.4	446.9
32.5°	906.4	794.1	564.9	418.3	374.7
35°	867.4	739.1	497.3	351.8	312.8
37.5°	826.2	684.1	432.0	293.4	249.8
40°	784.9	628.0	370.1	236.1	199.4
42.5°	741.4	571.8	311.7	187.9	159.3
45°	697.9	515.7	255.5	150.1	138.7
47.5°	654.3	459.5	206.3	129.5	118.0
50°	608.5	405.6	161.6	110.0	98.5
52.5°	564.9	351.8	126.0	90.5	80.2
55°	519.1	300.2	105.4	73.3	64.2
57.5°	476.7	247.5	87.1	57.3	50.4
60°	430.9	200.5	68.8	44.7	40.1
62.5°	387.3	157.0	52.7	35.5	32.1
65°	342.6	115.7	39.0	28.6	26.4
67.5°	297.9	83.7	29.8	22.9	21.8
70°	251.0	63.0	22.9	18.3	17.2
72.5°	206.3	44.7	17.2	14.9	13.8
75°	163.9	27.5	12.6	11.5	10.3
77.5°	126.0	16.0	9.2	9.2	8.0
80°	88.2	9.2	6.9	6.9	5.7
82.5°	53.9	5.7	4.6	4.6	4.6
85°	22.9	3.4	3.4	3.4	2.3
87.5°	3.4	1.1	1.1	1.1	1.1
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	19.12	20.48	19.49	20.79	21.11	7.70	9.05	8.06	9.36	9.68
	3H	20.88	22.08	21.25	22.41	22.77	8.36	9.56	8.74	9.89	10.26
	4H	21.58	22.70	21.98	23.05	23.43	8.56	9.68	8.96	10.03	10.41
	6H	22.09	23.12	22.50	23.49	23.88	8.68	9.71	9.09	10.08	10.47
	8H	22.23	23.21	22.66	23.60	24.00	8.71	9.69	9.14	10.08	10.49
	12H	22.28	23.22	22.71	23.60	24.03	8.72	9.66	9.15	10.04	10.47
4H	2H	18.93	20.05	19.33	20.40	20.79	8.25	9.38	8.66	9.73	10.11
	3H	20.72	21.64	21.13	22.05	22.45	9.05	9.97	9.46	10.38	10.78
	4H	21.42	22.24	21.85	22.66	23.10	9.31	10.13	9.75	10.55	11.00
	6H	21.99	22.70	22.45	23.14	23.61	9.51	10.22	9.97	10.66	11.13
	8H	22.16	22.83	22.63	23.27	23.74	9.56	10.22	10.03	10.67	11.14
	12H	22.25	22.83	22.73	23.32	23.79	9.59	10.18	10.08	10.66	11.14
8H	4H	21.29	21.96	21.76	22.40	22.87	9.62	10.29	10.09	10.73	11.20
	6H	21.85	22.39	22.35	22.89	23.37	9.87	10.41	10.37	10.91	11.39
	8H	22.02	22.51	22.54	23.02	23.52	9.96	10.45	10.48	10.96	11.45
	12H	22.13	22.56	22.64	23.05	23.62	10.04	10.47	10.56	10.96	11.53
12H	4H	21.25	21.84	21.74	22.32	22.79	9.67	10.26	10.15	10.74	11.21
	6H	21.79	22.28	22.31	22.79	23.28	9.92	10.40	10.44	10.92	11.41
	8H	21.98	22.41	22.50	22.91	23.48	10.05	10.47	10.56	10.97	11.54