

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: P1055625

Luminaire Tested: S123R3DR-S340D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055625  
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-S340D940-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

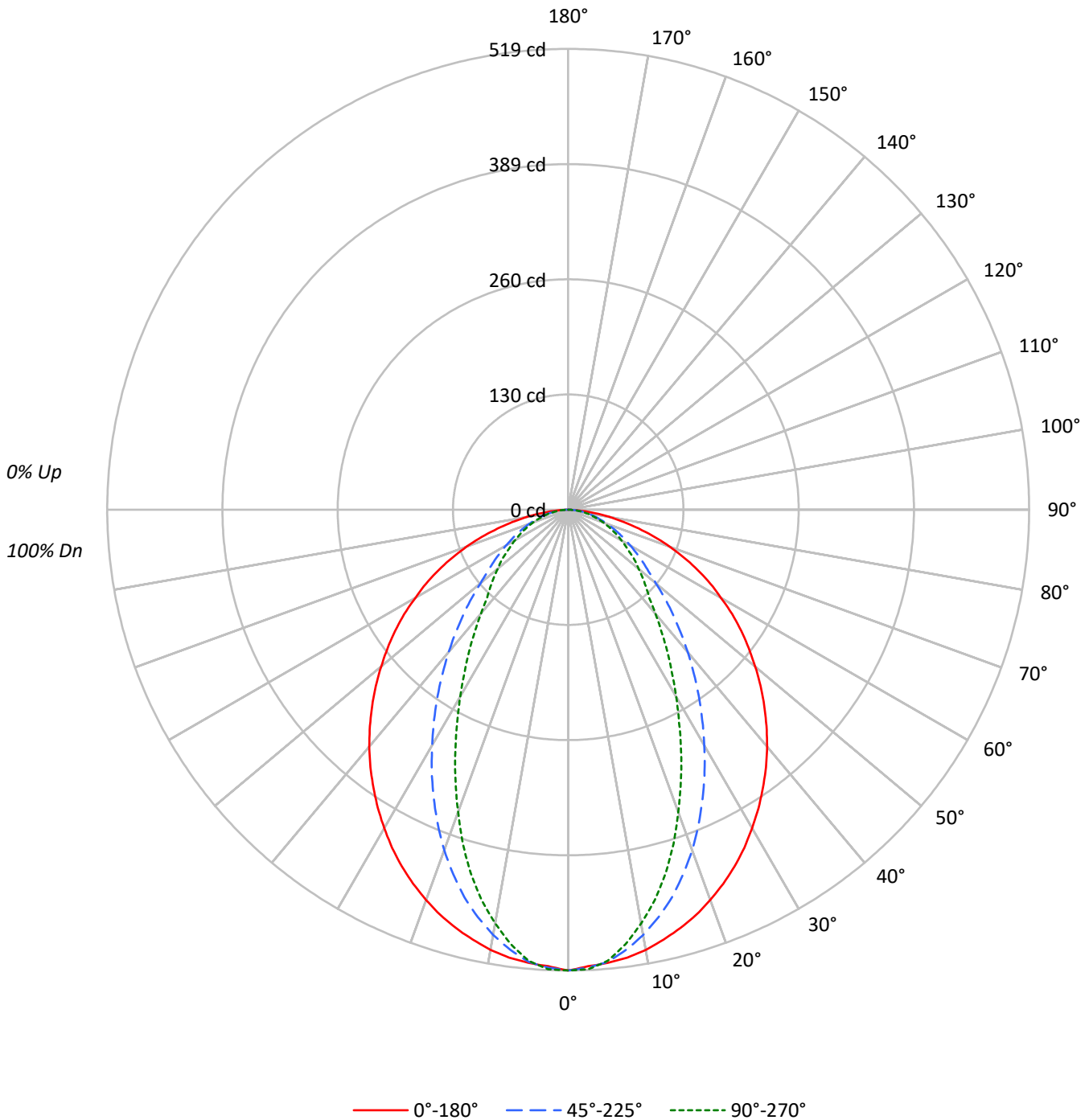
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 910.1 lumens  
Efficiency: N/A  
Efficacy: 72.2 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): 12.6  
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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50					50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

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

	0°	45°	90°
0°	6256	6256	6256
5°	6200	6187	6172
10°	6163	5953	5792
15°	6090	5639	5290
20°	6001	5233	4651
25°	5896	4765	4001
30°	5765	4263	3383
35°	5627	3771	2857
40°	5485	3292	2400
45°	5321	2839	2118
50°	5154	2418	1943
55°	5001	2155	1795
60°	4791	1946	1676
65°	4596	1783	1572
70°	4283	1643	1477
75°	3834	1519	1393
80°	3291	1402	1291
85°	2310	1286	1231

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5321 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.1	5.3
10°-20°	127.3	14.0
20°-30°	167.6	18.4
30°-40°	170.2	18.7
40°-50°	147.9	16.3
50°-60°	115.9	12.7
60°-70°	78.7	8.7
70°-80°	42.7	4.7
80°-90°	11.8	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°	343.0	37.7
0°-40°	513.2	56.4
0°-60°	777.0	85.4
0°-90°	910.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	910.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	519	519	519	519	519	
5°	512	518	511	506	510	49
15°	488	481	452	430	424	138
25°	443	416	358	314	301	204
35°	382	337	256	207	194	239
45°	312	250	166	128	124	241
55°	238	165	102	87	85	212
65°	161	89	62	56	55	159
75°	82	41	33	30	30	88
85°	17	10	9	8	9	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	518.9	518.9	518.9	518.9	518.9
2.5°	514.7	521.3	516.2	516.6	518.1
5°	512.3	518.5	511.2	506.5	510.0
7.5°	508.8	513.5	499.9	492.5	493.7
10°	503.4	504.9	486.3	474.7	473.1
12.5°	496.0	493.3	470.0	452.9	450.2
15°	487.9	480.9	451.8	429.7	423.8
17.5°	478.6	466.9	430.4	403.3	394.3
20°	467.7	451.4	407.9	373.4	362.5
22.5°	456.0	435.1	383.5	342.7	331.5
25°	443.2	416.5	358.2	313.6	300.8
27.5°	429.3	397.8	332.6	284.9	270.5
30°	414.1	378.4	306.2	256.9	243.0
32.5°	398.6	357.9	281.0	230.9	217.3
35°	382.3	336.9	256.2	207.3	194.1
37.5°	365.6	315.5	232.1	184.7	172.3
40°	348.5	293.8	209.2	163.8	152.5
42.5°	330.3	272.1	187.1	144.0	135.5
45°	312.1	250.3	166.5	128.5	124.2
47.5°	293.8	228.2	147.1	117.6	113.7
50°	274.8	206.9	128.9	107.5	103.6
52.5°	256.2	185.9	113.7	97.8	95.1
55°	237.9	165.3	102.5	87.3	85.4
57.5°	218.9	145.2	91.2	79.2	76.8
60°	198.7	125.8	80.7	70.6	69.5
62.5°	180.5	107.5	71.4	63.3	62.1
65°	161.1	89.3	62.5	55.9	55.1
67.5°	141.3	74.1	54.3	48.9	48.5
70°	121.5	62.5	46.6	42.3	41.9
72.5°	102.1	51.6	39.2	36.5	35.7
75°	82.3	41.1	32.6	30.3	29.9
77.5°	64.4	31.8	26.0	24.5	24.1
80°	47.4	23.7	20.2	19.0	18.6
82.5°	31.0	16.3	14.4	13.6	13.6
85°	16.7	10.1	9.3	8.5	8.9
87.5°	5.8	4.3	4.3	3.9	4.3
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	16.93	18.42	17.29	18.74	19.05	12.08	13.57	12.44	13.88	14.20
	3H	18.82	20.16	19.19	20.48	20.85	13.70	15.04	14.08	15.37	15.73
	4H	19.57	20.83	19.97	21.18	21.56	14.34	15.60	14.74	15.95	16.33
	6H	20.14	21.30	20.55	21.66	22.06	14.83	15.99	15.25	16.36	16.75
	8H	20.31	21.41	20.74	21.80	22.20	15.00	16.11	15.43	16.50	16.90
	12H	20.41	21.46	20.84	21.85	22.27	15.13	16.18	15.56	16.57	17.00
4H	2H	16.98	18.23	17.38	18.58	18.96	12.81	14.06	13.21	14.41	14.79
	3H	18.99	20.04	19.40	20.44	20.84	14.63	15.67	15.04	16.07	16.47
	4H	19.81	20.75	20.24	21.17	21.60	15.37	16.31	15.81	16.73	17.17
	6H	20.49	21.31	20.95	21.75	22.21	15.98	16.80	16.44	17.24	17.70
	8H	20.72	21.49	21.19	21.93	22.40	16.20	16.96	16.66	17.41	17.87
	12H	20.87	21.56	21.36	22.04	22.51	16.37	17.05	16.85	17.53	18.00
8H	4H	19.83	20.60	20.30	21.04	21.51	15.76	16.52	16.22	16.97	17.43
	6H	20.56	21.19	21.06	21.69	22.16	16.49	17.12	16.98	17.61	18.09
	8H	20.83	21.40	21.35	21.91	22.40	16.77	17.34	17.29	17.85	18.34
	12H	21.04	21.54	21.55	22.03	22.60	17.02	17.52	17.53	18.01	18.58
12H	4H	19.82	20.50	20.30	20.98	21.45	15.81	16.49	16.29	16.97	17.44
	6H	20.55	21.11	21.06	21.62	22.11	16.57	17.14	17.08	17.65	18.13
	8H	20.85	21.35	21.36	21.84	22.41	16.92	17.42	17.43	17.91	18.47