

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055809

Luminaire Tested: S123R3DR-H775D935-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055809  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-H775D935-X4F0-XX-UDD-FLL-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

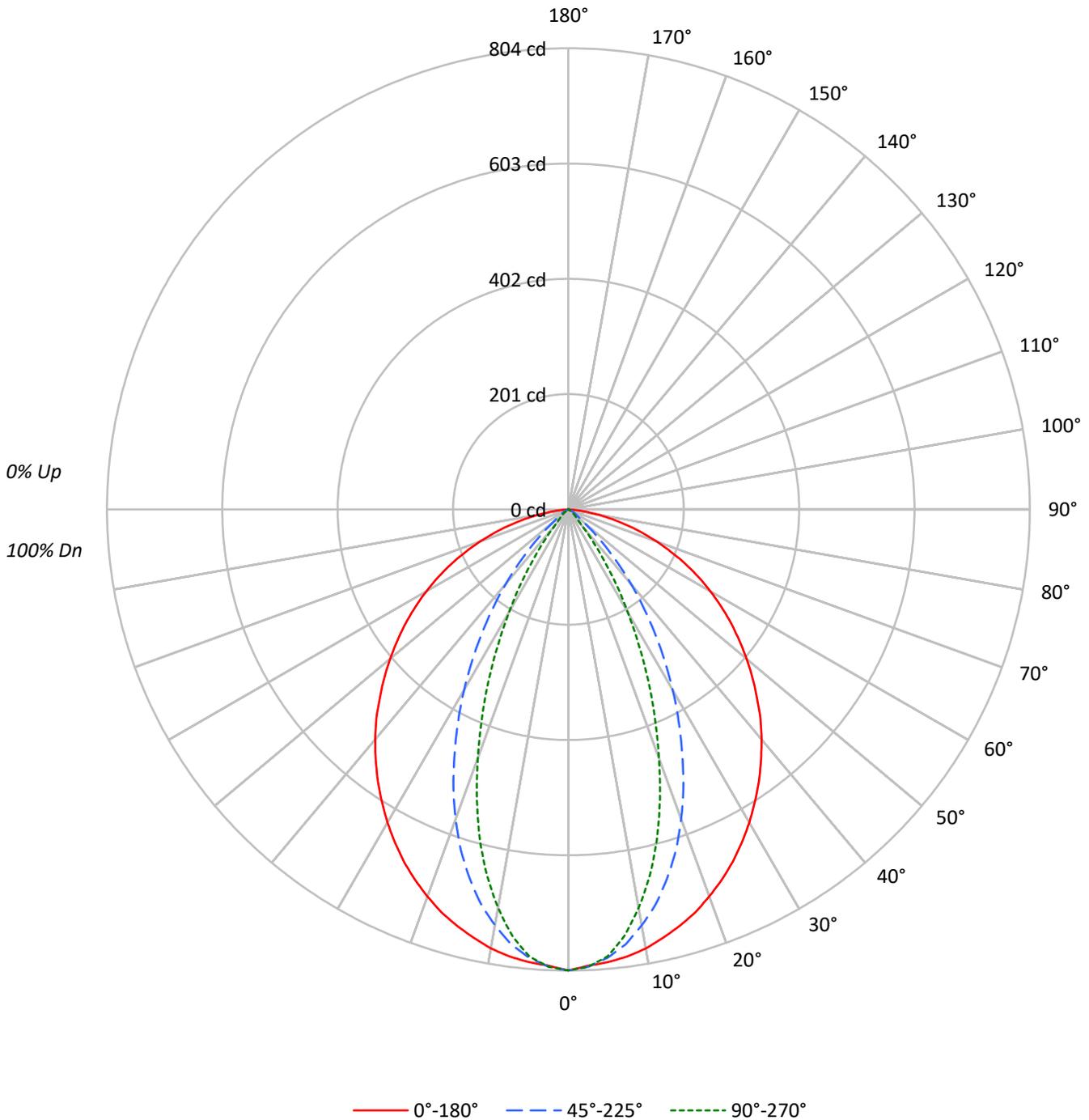
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 940.6 lumens  
Efficiency: N/A  
Efficacy: 39.5 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.8  
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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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

	0°	45°	90°
0°	9690	9690	9690
5°	9586	9496	9465
10°	9514	9013	8636
15°	9376	8304	7440
20°	9211	7371	5926
25°	9017	6244	4370
30°	8775	5060	2866
35°	8516	3853	1570
40°	8241	2665	538
45°	7918	1550	312
50°	7600	610	188
55°	7273	385	88
60°	6896	241	41
65°	6422	120	23
70°	5760	60	28
75°	4896	37	37
80°	3645	56	0
85°	1383	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7918 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.7	7.8
10°-20°	187.0	19.9
20°-30°	223.1	23.7
30°-40°	189.2	20.1
40°-50°	128.6	13.7
50°-60°	79.7	8.5
60°-70°	40.4	4.3
70°-80°	16.4	1.7
80°-90°	2.5	0.3
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°	483.8	51.4
0°-40°	673.0	71.5
0°-60°	881.3	93.7
0°-90°	940.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	940.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	792	800	785	779	782	75
15°	751	732	665	613	596	212
25°	678	614	469	363	328	312
35°	579	464	262	141	107	362
45°	464	304	91	22	18	359
55°	346	153	18	7	4	309
65°	225	38	4	1	1	222
75°	105	7	1	1	1	112
85°	10	0	0	1	0	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	803.7	803.7	803.7	803.7	803.7
2.5°	796.2	807.1	797.9	797.1	797.9
5°	792.1	799.6	784.6	778.7	782.1
7.5°	786.2	789.6	764.6	749.6	749.6
10°	777.1	774.6	736.2	711.2	705.4
12.5°	764.6	754.6	704.5	665.3	654.5
15°	751.2	732.0	665.3	612.8	596.1
17.5°	736.2	707.0	622.8	554.5	530.3
20°	717.9	678.7	574.5	491.1	461.9
22.5°	698.7	647.8	523.6	426.1	393.5
25°	677.8	614.5	469.4	362.7	328.5
27.5°	654.5	579.5	416.0	301.8	264.3
30°	630.3	542.8	363.5	243.5	205.9
32.5°	604.5	504.4	311.0	190.1	155.1
35°	578.6	464.4	261.8	140.9	106.7
37.5°	551.1	424.4	214.3	97.6	67.5
40°	523.6	385.2	169.3	61.7	34.2
42.5°	495.3	344.3	128.4	30.8	23.3
45°	464.4	304.3	90.9	22.5	18.3
47.5°	435.2	266.0	60.0	18.3	14.2
50°	405.2	227.6	32.5	13.3	10.0
52.5°	375.2	190.9	23.3	10.0	6.7
55°	346.0	153.4	18.3	6.7	4.2
57.5°	316.0	120.9	14.2	4.2	2.5
60°	286.0	89.2	10.0	2.5	1.7
62.5°	256.0	61.7	6.7	1.7	0.8
65°	225.1	37.5	4.2	0.8	0.8
67.5°	193.4	25.8	2.5	0.8	0.8
70°	163.4	18.3	1.7	0.8	0.8
72.5°	133.4	11.7	0.8	0.8	0.0
75°	105.1	6.7	0.8	0.8	0.8
77.5°	77.5	2.5	0.8	0.8	0.0
80°	52.5	0.8	0.8	0.8	0.0
82.5°	29.2	0.0	0.8	0.8	0.0
85°	10.0	0.0	0.0	0.8	0.0
87.5°	0.0	0.0	0.0	0.8	0.0
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	16.94	18.22	17.30	18.53	18.85	0.00	0.00	0.00	0.00	0.00
	3H	18.88	20.02	19.26	20.35	20.71	0.00	0.00	0.00	0.00	0.00
	4H	19.71	20.77	20.11	21.12	21.50	0.00	0.00	0.00	0.00	0.00
	6H	20.26	21.23	20.68	21.60	22.00	0.00	0.00	0.00	0.00	0.00
	8H	20.39	21.31	20.82	21.70	22.10	0.00	0.00	0.00	0.00	0.00
	12H	20.41	21.29	20.85	21.67	22.10	0.00	0.00	0.00	0.00	0.00
4H	2H	16.70	17.76	17.11	18.11	18.49	0.00	0.00	0.00	0.00	0.00
	3H	18.65	19.52	19.07	19.92	20.32	0.00	0.00	0.00	0.00	0.00
	4H	19.47	20.24	19.90	20.66	21.10	0.00	0.00	0.00	0.00	0.00
	6H	20.07	20.73	20.53	21.18	21.65	0.00	0.00	0.00	0.00	0.00
	8H	20.22	20.84	20.69	21.29	21.76	0.00	0.00	0.00	0.00	0.00
	12H	20.27	20.81	20.76	21.30	21.77	0.00	0.00	0.00	0.00	0.00
8H	4H	19.33	19.94	19.80	20.39	20.86	0.00	0.00	0.00	0.00	0.00
	6H	19.91	20.41	20.41	20.91	21.39	0.00	0.00	0.00	0.00	0.00
	8H	20.06	20.51	20.58	21.02	21.52	0.00	0.00	0.00	0.00	0.00
	12H	20.11	20.51	20.63	21.01	21.58	0.00	0.00	0.00	0.00	0.00
12H	4H	19.28	19.82	19.76	20.31	20.78	0.00	0.00	0.00	0.00	0.00
	6H	19.84	20.29	20.37	20.81	21.30	0.00	0.00	0.00	0.00	0.00
	8H	20.01	20.41	20.53	20.90	21.48	0.00	0.00	0.00	0.00	0.00