

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: P1055805

Luminaire Tested: S123R3DR-H775D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055805  
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-H775D927-X4F0-XX-UDD-FLL-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

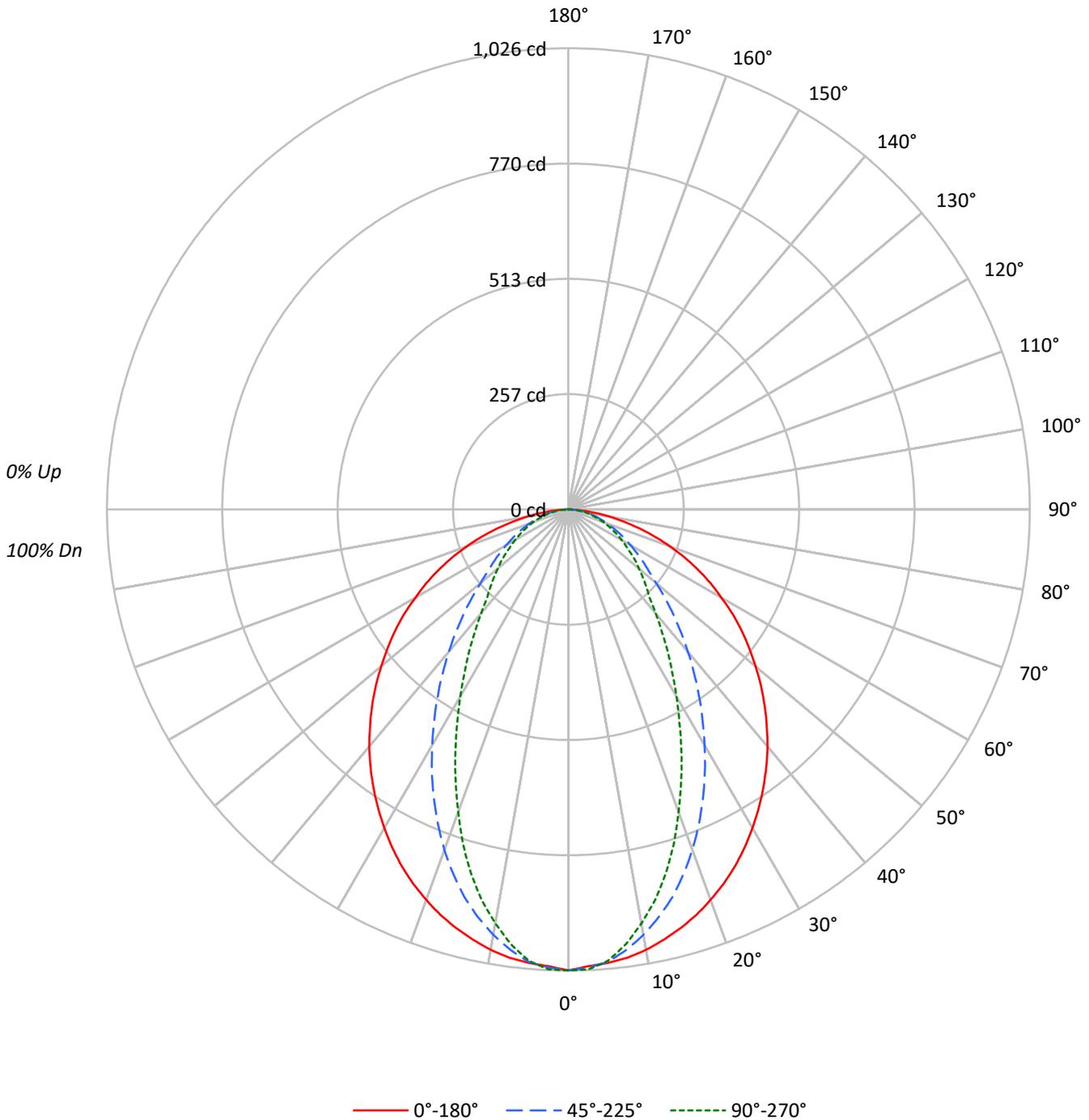
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1798.8 lumens  
Efficiency: N/A  
Efficacy: 75.6 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): 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	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°	12365	12365	12365
5°	12255	12227	12199
10°	12181	11767	11448
15°	12036	11145	10456
20°	11860	10344	9193
25°	11655	9420	7908
30°	11395	8427	6685
35°	11121	7452	5646
40°	10842	6508	4745
45°	10517	5611	4186
50°	10187	4777	3841
55°	9883	4256	3548
60°	9472	3848	3311
65°	9083	3523	3107
70°	8464	3247	2919
75°	7574	3000	2753
80°	6499	2770	2555
85°	4565	2545	2435

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10517 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.1	5.3
10°-20°	251.5	14.0
20°-30°	331.4	18.4
30°-40°	336.3	18.7
40°-50°	292.3	16.3
50°-60°	229.0	12.7
60°-70°	155.6	8.7
70°-80°	84.3	4.7
80°-90°	23.2	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°	678.0	37.7
0°-40°	1014.3	56.4
0°-60°	1535.7	85.4
0°-90°	1798.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1798.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1013	1025	1010	1001	1008	96
15°	964	950	893	849	838	272
25°	876	823	708	620	594	403
35°	756	666	506	410	384	473
45°	617	495	329	254	246	476
55°	470	327	202	173	169	420
65°	318	176	124	110	109	314
75°	163	81	64	60	59	174
85°	33	20	18	17	18	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1025.6	1025.6	1025.6	1025.6	1025.6
2.5°	1017.2	1030.2	1020.3	1021.0	1024.1
5°	1012.6	1024.9	1010.3	1001.1	1008.0
7.5°	1005.7	1014.9	988.1	973.5	975.8
10°	995.0	998.0	961.2	938.2	935.1
12.5°	980.4	975.0	929.0	895.2	889.9
15°	964.3	950.5	892.9	849.2	837.7
17.5°	945.9	922.9	850.7	797.0	779.4
20°	924.4	892.2	806.2	738.0	716.5
22.5°	901.4	859.9	757.9	677.4	655.1
25°	876.1	823.1	708.1	619.8	594.5
27.5°	848.4	786.3	657.4	563.1	534.7
30°	818.5	747.9	605.3	507.8	480.2
32.5°	787.8	707.3	555.4	456.4	429.6
35°	755.6	665.9	506.3	409.6	383.6
37.5°	722.6	623.7	458.7	365.2	340.6
40°	688.9	580.7	413.5	323.7	301.5
42.5°	652.8	537.8	369.8	284.6	267.7
45°	616.8	494.8	329.1	253.9	245.5
47.5°	580.7	451.1	290.7	232.4	224.8
50°	543.1	408.9	254.7	212.5	204.8
52.5°	506.3	367.5	224.8	193.3	187.9
55°	470.2	326.8	202.5	172.6	168.8
57.5°	432.7	286.9	180.3	156.5	151.9
60°	392.8	248.5	159.6	139.6	137.3
62.5°	356.7	212.5	141.2	125.0	122.7
65°	318.4	176.4	123.5	110.5	108.9
67.5°	279.2	146.5	107.4	96.7	95.9
70°	240.1	123.5	92.1	83.6	82.8
72.5°	201.8	102.0	77.5	72.1	70.6
75°	162.6	81.3	64.4	59.8	59.1
77.5°	127.3	62.9	51.4	48.3	47.6
80°	93.6	46.8	39.9	37.6	36.8
82.5°	61.4	32.2	28.4	26.8	26.8
85°	33.0	19.9	18.4	16.9	17.6
87.5°	11.5	8.4	8.4	7.7	8.4
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	19.30	20.79	19.66	21.10	21.42	14.45	15.94	14.81	16.25	16.57
	3H	21.18	22.52	21.56	22.85	23.21	16.07	17.41	16.45	17.74	18.10
	4H	21.94	23.19	22.34	23.54	23.92	16.71	17.97	17.11	18.31	18.69
	6H	22.50	23.66	22.92	24.03	24.42	17.20	18.36	17.61	18.73	19.12
	8H	22.68	23.78	23.10	24.17	24.57	17.37	18.47	17.80	18.86	19.26
	12H	22.77	23.83	23.20	24.21	24.64	17.49	18.55	17.92	18.93	19.36
4H	2H	19.34	20.60	19.74	20.95	21.33	15.17	16.43	15.57	16.78	17.16
	3H	21.36	22.40	21.77	22.80	23.20	16.99	18.04	17.41	18.44	18.84
	4H	22.18	23.12	22.61	23.53	23.97	17.74	18.68	18.17	19.10	19.54
	6H	22.86	23.68	23.32	24.12	24.58	18.35	19.17	18.81	19.61	20.07
	8H	23.09	23.85	23.55	24.30	24.77	18.56	19.33	19.03	19.77	20.24
	12H	23.24	23.92	23.72	24.40	24.87	18.73	19.41	19.21	19.89	20.36
8H	4H	22.20	22.96	22.66	23.41	23.88	18.12	18.89	18.59	19.33	19.80
	6H	22.93	23.56	23.43	24.05	24.53	18.85	19.48	19.35	19.97	20.45
	8H	23.20	23.76	23.71	24.27	24.76	19.14	19.70	19.65	20.22	20.70
	12H	23.41	23.91	23.92	24.40	24.97	19.38	19.88	19.89	20.38	20.94
12H	4H	22.19	22.87	22.67	23.35	23.82	18.18	18.86	18.66	19.34	19.81
	6H	22.91	23.48	23.43	23.99	24.48	18.93	19.50	19.45	20.01	20.50
	8H	23.22	23.72	23.73	24.21	24.78	19.28	19.78	19.79	20.27	20.84