

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: P1055811

Luminaire Tested: S123R3DR-H775D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055811  
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-H775D935-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

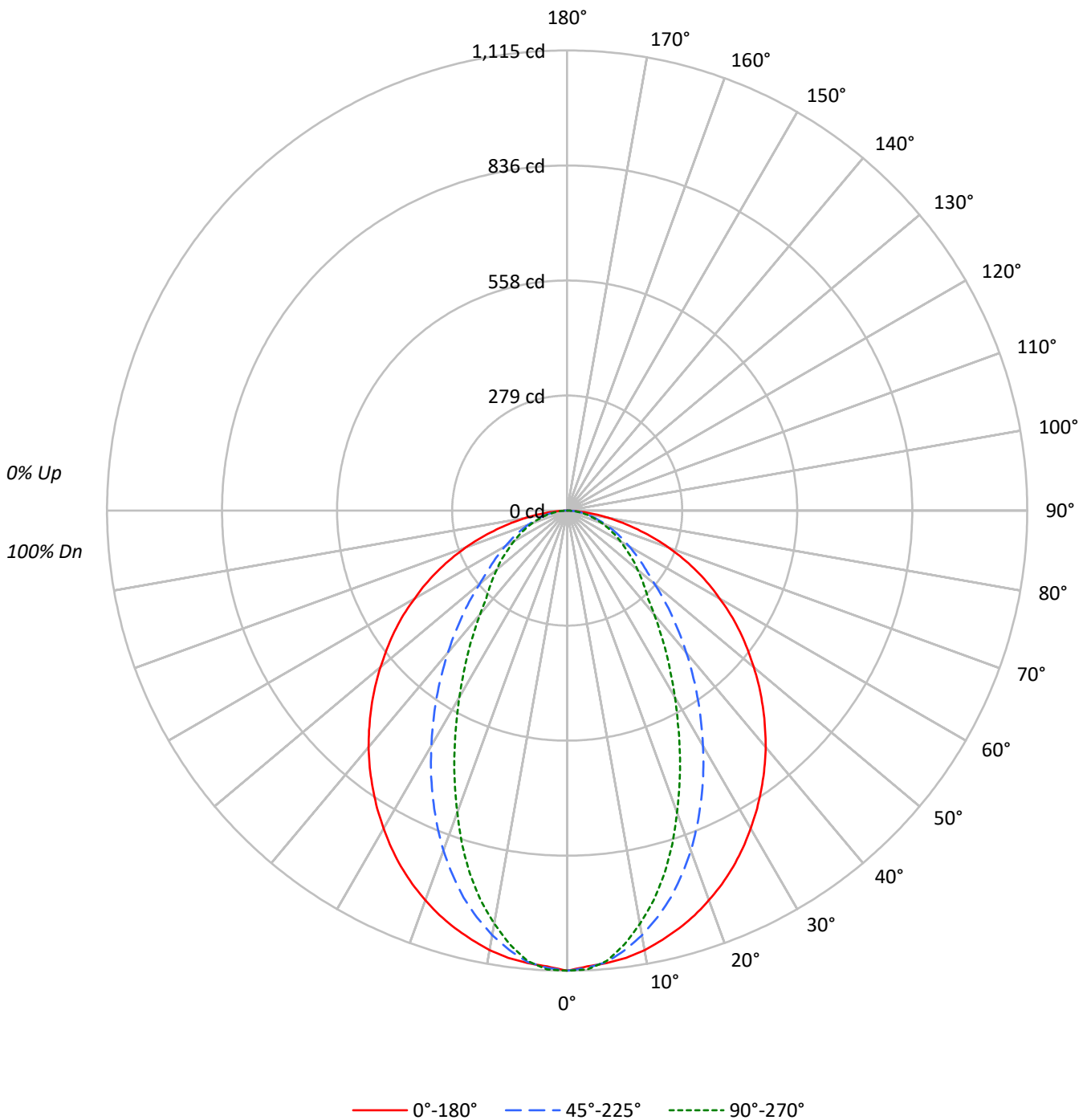
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1955.1 lumens  
Efficiency: N/A  
Efficacy: 82.1 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°	13439	13439	13439
5°	13320	13290	13259
10°	13239	12790	12443
15°	13081	12113	11365
20°	12890	11243	9991
25°	12667	10238	8596
30°	12385	9158	7266
35°	12088	8099	6136
40°	11783	7073	5158
45°	11429	6099	4549
50°	11072	5192	4175
55°	10743	4626	3855
60°	10294	4181	3598
65°	9871	3828	3378
70°	9200	3529	3173
75°	8236	3261	2991
80°	7061	3013	2777
85°	4966	2767	2656

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11429 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	5.3
10°-20°	273.4	14.0
20°-30°	360.1	18.4
30°-40°	365.5	18.7
40°-50°	317.7	16.3
50°-60°	248.9	12.7
60°-70°	169.1	8.7
70°-80°	91.7	4.7
80°-90°	25.2	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°	736.9	37.7
0°-40°	1102.4	56.4
0°-60°	1669.1	85.4
0°-90°	1955.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1955.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1115	1115	1115	1115	1115	
5°	1101	1114	1098	1088	1096	104
15°	1048	1033	970	923	910	295
25°	952	895	770	674	646	438
35°	821	724	550	445	417	514
45°	670	538	358	276	267	517
55°	511	355	220	188	183	456
65°	346	192	134	120	118	342
75°	177	88	70	65	64	189
85°	36	22	20	18	19	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1114.7	1114.7	1114.7	1114.7	1114.7
2.5°	1105.6	1119.7	1108.9	1109.7	1113.1
5°	1100.6	1113.9	1098.1	1088.1	1095.6
7.5°	1093.1	1103.1	1073.9	1058.0	1060.5
10°	1081.4	1084.7	1044.7	1019.7	1016.4
12.5°	1065.6	1059.7	1009.7	973.0	967.2
15°	1048.0	1033.0	970.5	923.0	910.5
17.5°	1028.0	1003.0	924.6	866.3	847.1
20°	1004.7	969.7	876.3	802.1	778.7
22.5°	979.7	934.6	823.8	736.2	712.0
25°	952.2	894.6	769.6	673.7	646.2
27.5°	922.1	854.6	714.5	612.0	581.1
30°	889.6	812.9	657.8	552.0	521.9
32.5°	856.3	768.7	603.6	496.1	466.9
35°	821.3	723.7	550.3	445.2	416.9
37.5°	785.4	677.9	498.6	396.9	370.2
40°	748.7	631.2	449.4	351.8	327.7
42.5°	709.5	584.5	401.9	309.3	291.0
45°	670.3	537.8	357.7	276.0	266.8
47.5°	631.2	490.3	316.0	252.6	244.3
50°	590.3	444.4	276.8	231.0	222.6
52.5°	550.3	399.4	244.3	210.1	204.3
55°	511.1	355.2	220.1	187.6	183.4
57.5°	470.2	311.8	195.9	170.1	165.1
60°	426.9	270.1	173.4	151.7	149.2
62.5°	387.7	231.0	153.4	135.9	133.4
65°	346.0	191.8	134.2	120.1	118.4
67.5°	303.5	159.2	116.7	105.1	104.2
70°	261.0	134.2	100.1	90.9	90.0
72.5°	219.3	110.9	84.2	78.4	76.7
75°	176.8	88.4	70.0	65.0	64.2
77.5°	138.4	68.4	55.9	52.5	51.7
80°	101.7	50.9	43.4	40.9	40.0
82.5°	66.7	35.0	30.8	29.2	29.2
85°	35.9	21.7	20.0	18.3	19.2
87.5°	12.5	9.2	9.2	8.3	9.2
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	19.58	21.08	19.95	21.39	21.70	14.73	16.23	15.10	16.54	16.85
	3H	21.47	22.81	21.85	23.14	23.50	16.36	17.70	16.74	18.03	18.39
	4H	22.23	23.48	22.63	23.83	24.21	17.00	18.25	17.40	18.60	18.98
	6H	22.79	23.95	23.20	24.32	24.71	17.49	18.65	17.90	19.02	19.41
	8H	22.97	24.07	23.39	24.46	24.86	17.66	18.76	18.09	19.15	19.55
	12H	23.06	24.12	23.49	24.50	24.93	17.78	18.84	18.21	19.22	19.65
4H	2H	19.63	20.89	20.03	21.24	21.61	15.46	16.72	15.86	17.07	17.45
	3H	21.65	22.69	22.06	23.09	23.49	17.28	18.33	17.69	18.73	19.13
	4H	22.47	23.41	22.90	23.82	24.26	18.03	18.97	18.46	19.39	19.82
	6H	23.15	23.97	23.61	24.41	24.87	18.64	19.46	19.10	19.90	20.36
	8H	23.38	24.14	23.84	24.59	25.05	18.85	19.62	19.32	20.06	20.53
	12H	23.53	24.21	24.01	24.69	25.16	19.02	19.70	19.50	20.18	20.65
8H	4H	22.49	23.25	22.95	23.70	24.17	18.41	19.18	18.88	19.62	20.09
	6H	23.22	23.85	23.72	24.34	24.82	19.14	19.77	19.64	20.26	20.74
	8H	23.49	24.05	24.00	24.56	25.05	19.43	20.00	19.94	20.51	20.99
	12H	23.70	24.20	24.21	24.69	25.26	19.67	20.17	20.18	20.67	21.23
12H	4H	22.48	23.16	22.96	23.64	24.11	18.47	19.15	18.95	19.63	20.10
	6H	23.20	23.77	23.72	24.28	24.77	19.22	19.79	19.74	20.30	20.79
	8H	23.51	24.01	24.02	24.50	25.07	19.57	20.07	20.08	20.56	21.13