

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: P1055361

Luminaire Tested: S122R3DR-H675D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055361  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H675D830-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

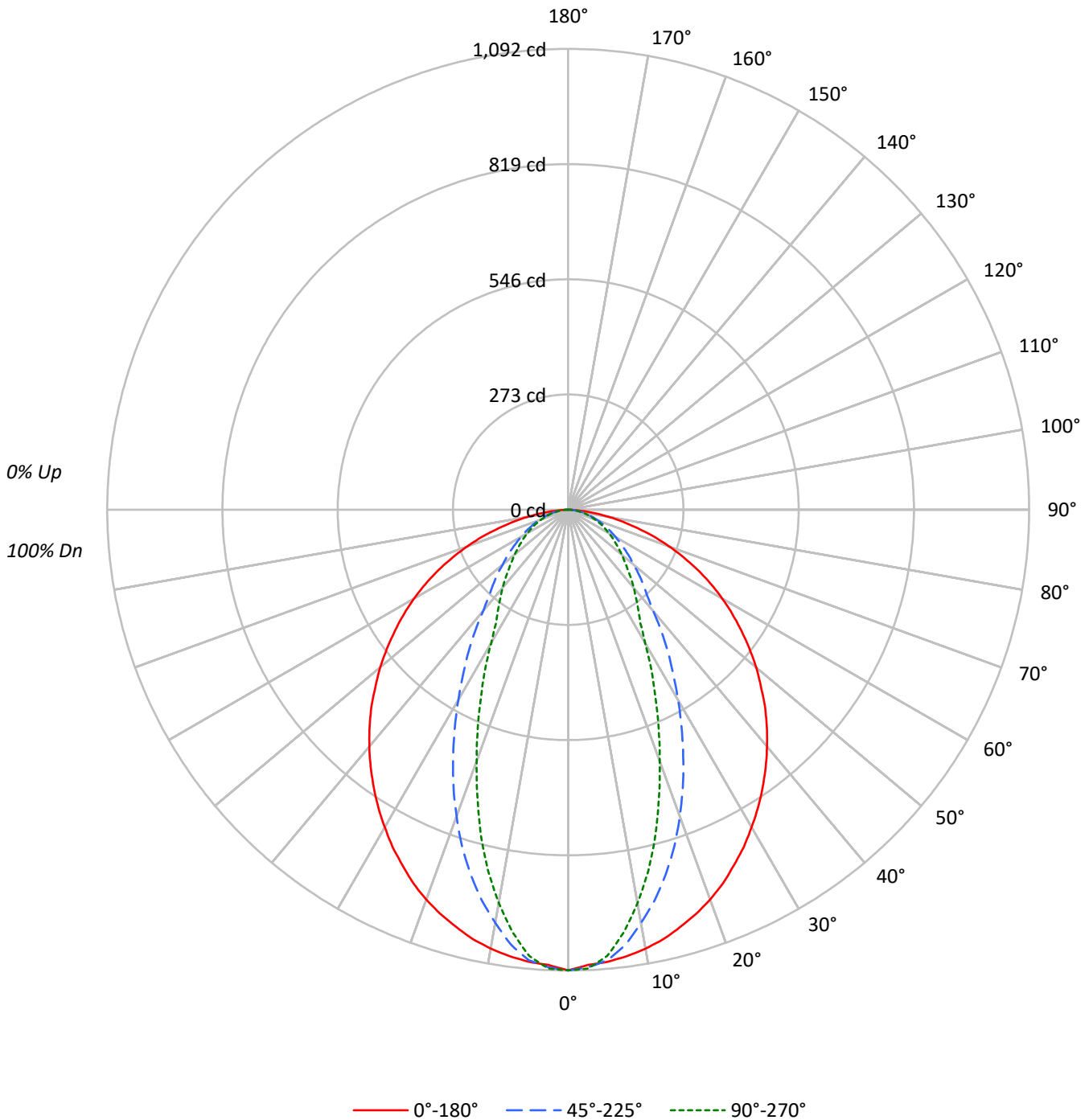
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1651.1 lumens  
Efficiency: N/A  
Efficacy: 69.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' 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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	20681	20681	20681
5°	20448	20378	20188
10°	20315	19123	18209
15°	20087	17527	15664
20°	19819	15587	12789
25°	19424	13471	10208
30°	19009	11382	7968
35°	18577	9520	6691
40°	18126	7721	5960
45°	17657	6749	5332
50°	17136	5972	4869
55°	16552	5397	4522
60°	15979	4911	4221
65°	15220	4501	3967
70°	14109	4199	3739
75°	12495	3806	3543
80°	10660	3590	3284
85°	7347	3174	2978

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17657 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.0	6.1
10°-20°	252.6	15.3
20°-30°	311.2	18.8
30°-40°	298.6	18.1
40°-50°	257.5	15.6
50°-60°	199.8	12.1
60°-70°	136.8	8.3
70°-80°	74.3	4.5
80°-90°	20.4	1.2
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°	663.8	40.2
0°-40°	962.4	58.3
0°-60°	1419.7	86.0
0°-90°	1651.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1651.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1092	1092	1092	1092	1092	
5°	1075	1091	1072	1058	1062	102
15°	1024	993	894	820	799	289
25°	929	830	644	526	488	428
35°	803	637	412	307	289	502
45°	659	444	252	208	199	508
55°	501	266	163	142	137	448
65°	340	145	100	91	88	335
75°	171	67	52	49	48	183
85°	34	16	15	15	14	43
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1091.6	1091.6	1091.6	1091.6	1091.6
2.5°	1079.8	1098.0	1085.2	1085.2	1088.0
5°	1075.2	1090.7	1071.5	1057.9	1061.5
7.5°	1067.0	1077.9	1039.6	1010.4	1009.5
10°	1056.0	1056.9	994.0	955.6	946.5
12.5°	1042.3	1027.7	947.4	889.9	876.2
15°	1024.1	993.1	893.6	820.5	798.6
17.5°	1004.9	957.5	836.1	744.8	714.7
20°	983.0	914.6	773.1	669.0	634.3
22.5°	958.4	873.5	710.1	596.0	559.5
25°	929.2	829.7	644.4	525.7	488.3
27.5°	900.9	784.9	581.4	463.7	425.3
30°	868.9	736.6	520.3	404.3	364.2
32.5°	837.0	687.3	463.7	347.8	317.6
35°	803.2	637.1	411.6	306.7	289.3
37.5°	768.5	587.8	362.4	279.3	263.8
40°	732.9	538.5	312.2	252.8	241.0
42.5°	696.4	490.1	277.5	230.9	220.0
45°	659.0	443.6	251.9	208.1	199.0
47.5°	618.8	397.0	227.3	188.9	180.7
50°	581.4	352.3	202.6	171.6	165.2
52.5°	541.2	308.5	182.5	156.1	150.6
55°	501.1	266.5	163.4	141.5	136.9
57.5°	461.8	226.4	145.1	127.8	124.1
60°	421.7	194.4	129.6	115.0	111.4
62.5°	380.6	168.9	115.0	103.1	99.5
65°	339.5	145.1	100.4	91.3	88.5
67.5°	296.6	122.3	87.6	80.3	78.5
70°	254.7	102.2	75.8	69.4	67.5
72.5°	213.6	83.1	63.9	59.3	57.5
75°	170.7	66.6	52.0	49.3	48.4
77.5°	133.3	52.0	42.0	40.2	39.2
80°	97.7	38.3	32.9	31.0	30.1
82.5°	64.8	26.5	23.7	22.8	21.9
85°	33.8	16.4	14.6	14.6	13.7
87.5°	11.0	7.3	7.3	7.3	6.4
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	20.13	21.60	20.50	21.92	22.23	14.94	16.41	15.30	16.72	17.04
	3H	22.46	23.78	22.84	24.11	24.47	16.59	17.90	16.97	18.23	18.59
	4H	23.36	24.59	23.76	24.94	25.32	17.22	18.46	17.62	18.81	19.19
	6H	24.02	25.16	24.43	25.53	25.92	17.72	18.86	18.13	19.22	19.61
	8H	24.23	25.31	24.66	25.70	26.11	17.88	18.97	18.31	19.36	19.76
	12H	24.35	25.38	24.78	25.77	26.19	18.00	19.04	18.43	19.42	19.85
4H	2H	20.15	21.39	20.55	21.73	22.11	15.65	16.89	16.06	17.24	17.62
	3H	22.56	23.59	22.97	23.99	24.39	17.50	18.53	17.91	18.93	19.33
	4H	23.49	24.41	23.92	24.83	25.27	18.25	19.17	18.68	19.59	20.03
	6H	24.27	25.07	24.73	25.52	25.98	18.86	19.67	19.32	20.11	20.57
	8H	24.54	25.29	25.00	25.73	26.20	19.08	19.83	19.55	20.27	20.74
	12H	24.72	25.39	25.20	25.86	26.34	19.24	19.91	19.73	20.39	20.86
8H	4H	23.48	24.23	23.95	24.68	25.15	18.63	19.38	19.09	19.82	20.29
	6H	24.29	24.91	24.79	25.40	25.88	19.37	19.98	19.86	20.48	20.95
	8H	24.59	25.15	25.11	25.66	26.15	19.66	20.22	20.18	20.73	21.22
	12H	24.83	25.31	25.34	25.81	26.37	19.91	20.39	20.42	20.89	21.45
12H	4H	23.47	24.13	23.95	24.61	25.08	18.69	19.35	19.17	19.83	20.31
	6H	24.27	24.82	24.78	25.33	25.82	19.45	20.01	19.97	20.52	21.01
	8H	24.60	25.09	25.11	25.58	26.15	19.81	20.30	20.32	20.79	21.36