

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: P1055362

Luminaire Tested: S122R3DR-H675D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055362  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H675D835-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

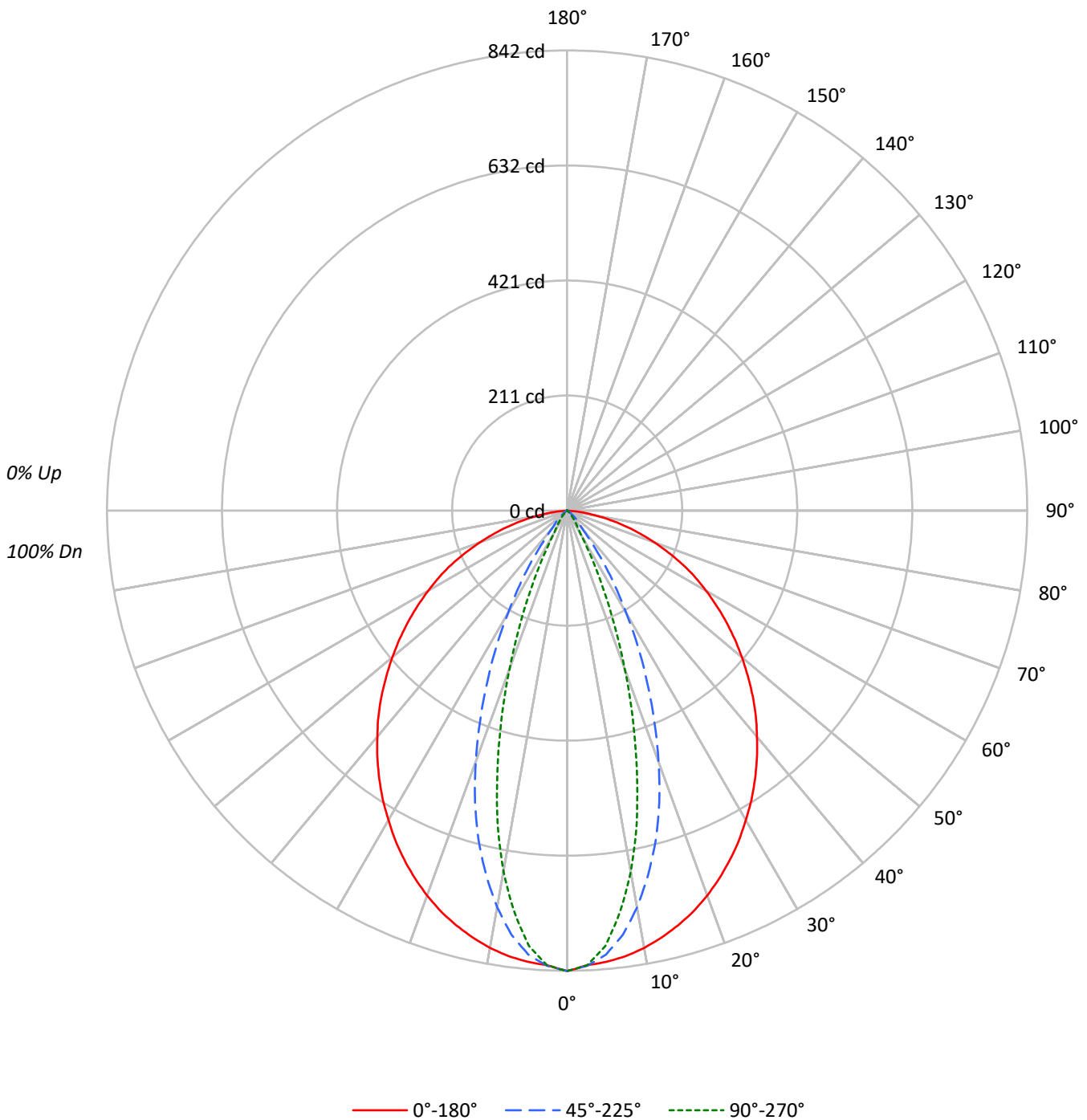
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 766.5 lumens  
Efficiency: N/A  
Efficacy: 32.2 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
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 (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

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

	0°	45°	90°
0°	15962	15962	15962
5°	15764	15507	15213
10°	15631	14177	12911
15°	15405	12271	9668
20°	15111	9859	6190
25°	14738	7227	3177
30°	14301	4723	1039
35°	13863	2620	604
40°	13365	1054	336
45°	12869	699	129
50°	12303	401	56
55°	11739	192	33
60°	11117	72	0
65°	10463	45	0
70°	9389	55	0
75°	8081	73	0
80°	6132	0	0
85°	2522	217	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12869 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.5	9.9
10°-20°	175.5	22.9
20°-30°	178.2	23.2
30°-40°	133.7	17.4
40°-50°	93.6	12.2
50°-60°	57.3	7.5
60°-70°	34.1	4.5
70°-80°	15.8	2.1
80°-90°	2.8	0.4
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°	429.2	56.0
0°-40°	562.9	73.4
0°-60°	713.8	93.1
0°-90°	766.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	766.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	829	837	815	800	800	79
15°	785	743	626	530	493	221
25°	705	581	346	198	152	325
35°	599	390	113	34	26	375
45°	480	206	26	8	5	370
55°	355	63	6	2	1	318
65°	233	18	1	1	0	230
75°	110	2	1	1	0	117
85°	12	0	1	1	0	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	842.5	842.5	842.5	842.5	842.5
2.5°	832.8	845.4	833.8	831.8	832.8
5°	828.9	836.7	815.4	799.9	799.9
7.5°	822.2	822.2	782.4	750.5	740.8
10°	812.5	801.8	736.9	685.6	671.1
12.5°	799.9	774.7	683.7	611.0	587.8
15°	785.4	742.7	625.6	529.7	492.9
17.5°	768.9	706.9	560.7	441.6	399.0
20°	749.5	668.2	489.0	351.5	307.0
22.5°	728.2	625.6	416.4	271.1	223.7
25°	705.0	581.0	345.7	197.5	152.0
27.5°	680.8	534.5	280.8	135.6	93.0
30°	653.7	486.1	215.9	80.4	47.5
32.5°	627.5	439.6	161.7	43.6	34.9
35°	599.4	390.3	113.3	33.9	26.1
37.5°	570.4	343.8	69.7	25.2	19.4
40°	540.4	296.3	42.6	18.4	13.6
42.5°	511.3	251.8	33.9	12.6	8.7
45°	480.3	206.3	26.1	7.7	4.8
47.5°	448.4	164.6	19.4	4.8	2.9
50°	417.4	127.8	13.6	2.9	1.9
52.5°	386.4	93.9	8.7	1.9	1.0
55°	355.4	62.9	5.8	1.9	1.0
57.5°	324.4	44.5	3.9	1.0	1.0
60°	293.4	34.9	1.9	1.0	0.0
62.5°	264.4	27.1	1.9	1.0	1.0
65°	233.4	18.4	1.0	1.0	0.0
67.5°	200.5	11.6	1.0	1.0	0.0
70°	169.5	6.8	1.0	1.0	0.0
72.5°	139.4	3.9	1.0	1.0	0.0
75°	110.4	1.9	1.0	1.0	0.0
77.5°	82.3	1.0	0.0	1.0	0.0
80°	56.2	0.0	0.0	1.0	0.0
82.5°	32.9	0.0	0.0	1.0	0.0
85°	11.6	0.0	1.0	1.0	0.0
87.5°	0.0	0.0	1.0	1.0	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	15.83	17.09	16.20	17.41	17.72	0.00	0.00	0.00	0.00	0.00
	3H	19.58	20.69	19.96	21.03	21.39	0.00	0.00	0.00	0.00	0.00
	4H	20.89	21.93	21.29	22.28	22.66	0.00	0.00	0.00	0.00	0.00
	6H	21.74	22.70	22.16	23.07	23.46	0.00	0.00	0.00	0.00	0.00
	8H	21.96	22.86	22.39	23.25	23.66	0.00	0.00	0.00	0.00	0.00
	12H	22.02	22.88	22.45	23.27	23.70	0.00	0.00	0.00	0.00	0.00
4H	2H	15.59	16.63	15.99	16.98	17.36	0.00	0.00	0.00	0.00	0.00
	3H	19.33	20.18	19.74	20.59	20.99	0.00	0.00	0.00	0.00	0.00
	4H	20.63	21.39	21.06	21.81	22.25	0.00	0.00	0.00	0.00	0.00
	6H	21.55	22.20	22.01	22.65	23.12	0.00	0.00	0.00	0.00	0.00
	8H	21.80	22.42	22.27	22.86	23.34	0.00	0.00	0.00	0.00	0.00
	12H	21.91	22.44	22.39	22.93	23.40	0.00	0.00	0.00	0.00	0.00
8H	4H	20.48	21.09	20.95	21.54	22.01	0.00	0.00	0.00	0.00	0.00
	6H	21.38	21.88	21.89	22.38	22.86	0.00	0.00	0.00	0.00	0.00
	8H	21.64	22.08	22.16	22.60	23.09	0.00	0.00	0.00	0.00	0.00
	12H	21.76	22.15	22.27	22.64	23.22	0.00	0.00	0.00	0.00	0.00
12H	4H	20.43	20.97	20.92	21.46	21.93	0.00	0.00	0.00	0.00	0.00
	6H	21.32	21.76	21.84	22.28	22.77	0.00	0.00	0.00	0.00	0.00
	8H	21.60	21.99	22.11	22.48	23.05	0.00	0.00	0.00	0.00	0.00