

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: P1055373

Luminaire Tested: S122R3DR-H675D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055373  
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-H675D927-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

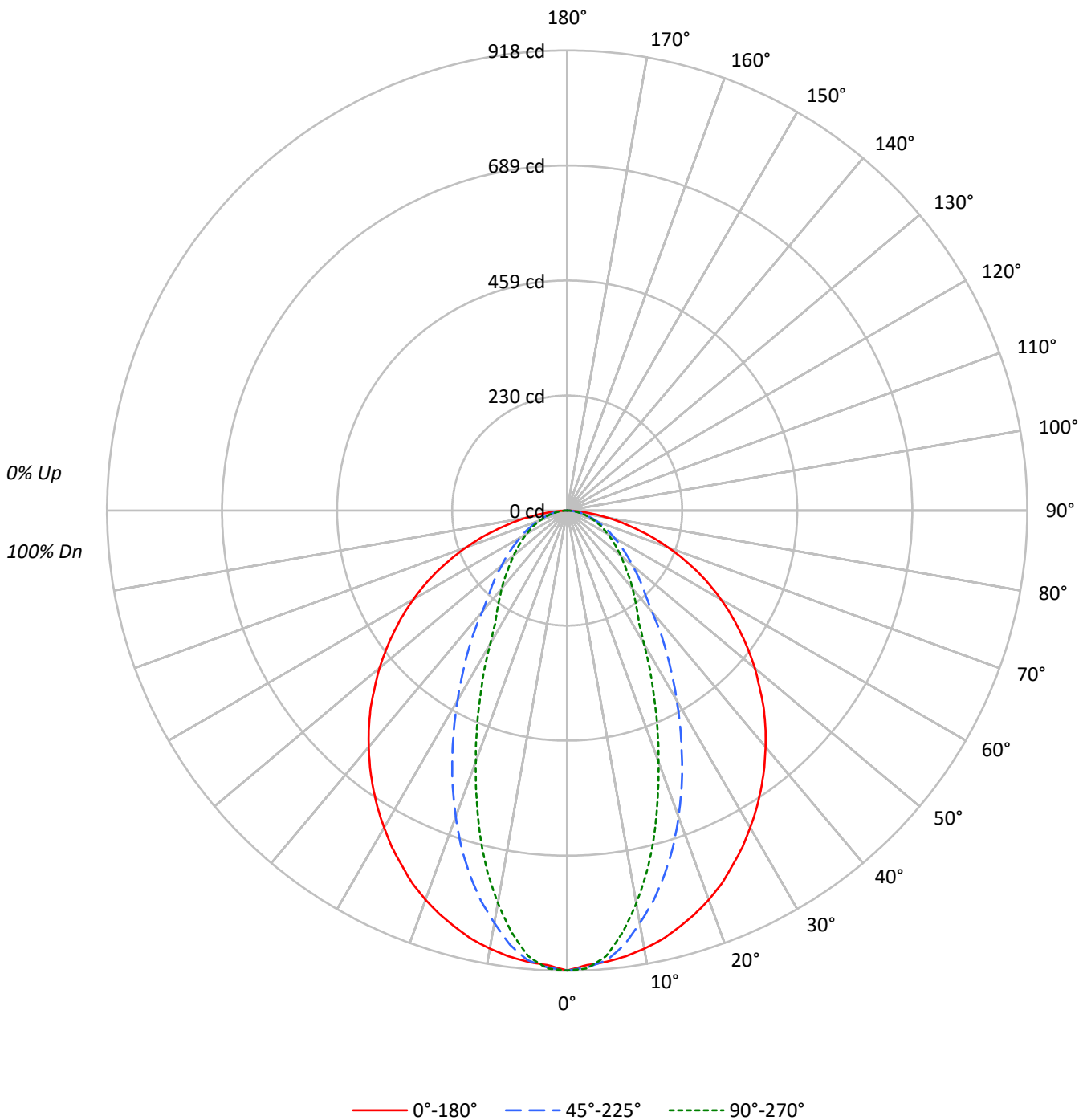
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1387.7 lumens  
Efficiency: N/A  
Efficacy: 58.3 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	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					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°	17383	17383	17383
5°	17187	17128	16968
10°	17076	16072	15304
15°	16882	14730	13165
20°	16658	13101	10750
25°	16324	11322	8579
30°	15977	9567	6696
35°	15614	8003	5625
40°	15235	6490	5008
45°	14841	5672	4480
50°	14404	5020	4091
55°	13913	4535	3802
60°	13429	4126	3547
65°	12794	3784	3335
70°	11854	3529	3146
75°	10504	3199	2979
80°	8958	3011	2760
85°	6174	2674	2500

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14841 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.1	6.1
10°-20°	212.3	15.3
20°-30°	261.6	18.8
30°-40°	250.9	18.1
40°-50°	216.5	15.6
50°-60°	167.9	12.1
60°-70°	115.0	8.3
70°-80°	62.4	4.5
80°-90°	17.1	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°	557.9	40.2
0°-40°	808.9	58.3
0°-60°	1193.2	86.0
0°-90°	1387.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1387.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	918	918	918	918	918	
5°	904	917	901	889	892	86
15°	861	835	751	690	671	243
25°	781	697	542	442	410	360
35°	675	536	346	258	243	422
45°	554	373	212	175	167	427
55°	421	224	137	119	115	377
65°	285	122	84	77	74	282
75°	144	56	44	41	41	154
85°	28	14	12	12	12	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	917.5	917.5	917.5	917.5	917.5
2.5°	907.5	922.9	912.1	912.1	914.4
5°	903.7	916.7	900.6	889.1	892.2
7.5°	896.8	906.0	873.8	849.2	848.4
10°	887.6	888.3	835.4	803.2	795.5
12.5°	876.1	863.8	796.3	747.9	736.4
15°	860.7	834.6	751.0	689.6	671.2
17.5°	844.6	804.7	702.7	626.0	600.7
20°	826.2	768.7	649.8	562.3	533.2
22.5°	805.5	734.1	596.8	500.9	470.2
25°	780.9	697.3	541.6	441.9	410.4
27.5°	757.2	659.7	488.7	389.7	357.5
30°	730.3	619.1	437.3	339.8	306.1
32.5°	703.5	577.6	389.7	292.3	267.0
35°	675.1	535.5	346.0	257.8	243.2
37.5°	645.9	494.0	304.5	234.7	221.7
40°	616.0	452.6	262.4	212.5	202.5
42.5°	585.3	411.9	233.2	194.1	184.9
45°	553.9	372.8	211.7	174.9	167.2
47.5°	520.1	333.7	191.0	158.8	151.9
50°	488.7	296.1	170.3	144.2	138.8
52.5°	454.9	259.3	153.4	131.2	126.6
55°	421.2	224.0	137.3	118.9	115.1
57.5°	388.2	190.2	122.0	107.4	104.3
60°	354.4	163.4	108.9	96.7	93.6
62.5°	319.9	141.9	96.7	86.7	83.6
65°	285.4	122.0	84.4	76.7	74.4
67.5°	249.3	102.8	73.6	67.5	66.0
70°	214.0	85.9	63.7	58.3	56.8
72.5°	179.5	69.8	53.7	49.9	48.3
75°	143.5	56.0	43.7	41.4	40.7
77.5°	112.0	43.7	35.3	33.8	33.0
80°	82.1	32.2	27.6	26.1	25.3
82.5°	54.5	22.2	19.9	19.2	18.4
85°	28.4	13.8	12.3	12.3	11.5
87.5°	9.2	6.1	6.1	6.1	5.4
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	19.53	21.00	19.89	21.31	21.63	14.34	15.80	14.70	16.12	16.43
	3H	21.86	23.18	22.24	23.50	23.87	15.98	17.30	16.36	17.63	17.99
	4H	22.75	23.99	23.16	24.34	24.72	16.62	17.85	17.02	18.20	18.58
	6H	23.42	24.56	23.83	24.92	25.32	17.11	18.25	17.53	18.62	19.01
	8H	23.63	24.71	24.05	25.10	25.50	17.28	18.37	17.71	18.76	19.16
	12H	23.74	24.78	24.17	25.16	25.59	17.40	18.44	17.83	18.82	19.25
4H	2H	19.55	20.78	19.95	21.13	21.51	15.05	16.29	15.45	16.63	17.01
	3H	21.96	22.98	22.37	23.38	23.78	16.90	17.92	17.31	18.33	18.73
	4H	22.89	23.81	23.32	24.23	24.67	17.65	18.57	18.08	18.99	19.43
	6H	23.67	24.47	24.12	24.91	25.37	18.26	19.06	18.72	19.51	19.97
	8H	23.94	24.69	24.40	25.13	25.60	18.48	19.23	18.94	19.67	20.14
	12H	24.11	24.78	24.60	25.26	25.73	18.64	19.31	19.12	19.79	20.26
8H	4H	22.88	23.63	23.35	24.07	24.54	18.03	18.77	18.49	19.22	19.69
	6H	23.69	24.31	24.19	24.80	25.28	18.76	19.38	19.26	19.87	20.35
	8H	23.99	24.54	24.51	25.05	25.54	19.06	19.61	19.57	20.12	20.61
	12H	24.22	24.71	24.73	25.20	25.77	19.30	19.79	19.81	20.29	20.85
12H	4H	22.86	23.53	23.34	24.01	24.48	18.08	18.75	18.57	19.23	19.70
	6H	23.66	24.22	24.18	24.73	25.22	18.85	19.40	19.36	19.91	20.40
	8H	24.00	24.49	24.51	24.98	25.55	19.21	19.69	19.72	20.19	20.75