

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: P1055382

Luminaire Tested: S122R3DR-H675D940-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055382  
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-H675D940-X4F0-XX-UDD-FLL-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

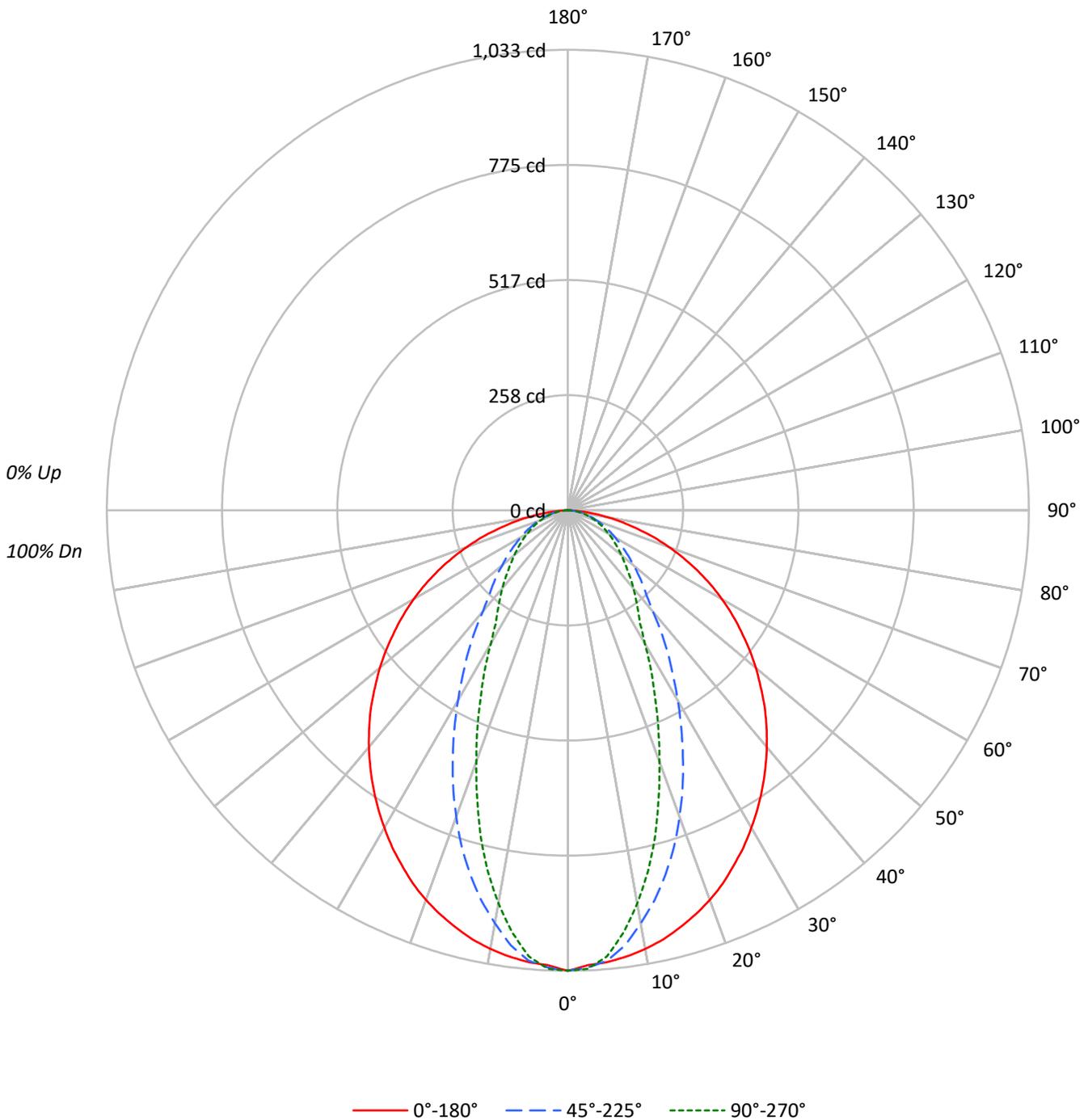
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1562.1 lumens  
Efficiency: N/A  
Efficacy: 65.6 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°	19567	19567	19567
5°	19345	19281	19100
10°	19221	18092	17228
15°	19004	16582	14820
20°	18750	14746	12099
25°	18375	12743	9658
30°	17985	10768	7537
35°	17575	9006	6330
40°	17149	7303	5639
45°	16706	6385	5043
50°	16214	5650	4607
55°	15660	5107	4278
60°	15115	4646	3990
65°	14399	4259	3757
70°	13344	3972	3540
75°	11822	3601	3353
80°	10081	3393	3109
85°	6934	3000	2826

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16706 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.6	6.1
10°-20°	238.9	15.3
20°-30°	294.4	18.8
30°-40°	282.5	18.1
40°-50°	243.7	15.6
50°-60°	189.0	12.1
60°-70°	129.4	8.3
70°-80°	70.3	4.5
80°-90°	19.3	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°	628.0	40.2
0°-40°	910.5	58.3
0°-60°	1343.1	86.0
0°-90°	1562.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1562.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1033	1033	1033	1033	1033	
5°	1017	1032	1014	1001	1004	97
15°	969	940	845	776	756	273
25°	879	785	610	497	462	405
35°	760	603	389	290	274	475
45°	624	420	238	197	188	480
55°	474	252	155	134	130	424
65°	321	137	95	86	84	317
75°	162	63	49	47	46	173
85°	32	16	14	14	13	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1032.8	1032.8	1032.8	1032.8	1032.8
2.5°	1021.5	1038.8	1026.7	1026.7	1029.3
5°	1017.2	1031.9	1013.8	1000.8	1004.3
7.5°	1009.4	1019.8	983.5	955.9	955.0
10°	999.1	999.9	940.4	904.1	895.5
12.5°	986.1	972.3	896.3	841.9	829.0
15°	968.9	939.5	845.4	776.3	755.6
17.5°	950.7	905.8	791.0	704.6	676.1
20°	930.0	865.2	731.4	632.9	600.1
22.5°	906.7	826.4	671.8	563.9	529.3
25°	879.0	784.9	609.6	497.4	462.0
27.5°	852.3	742.6	550.1	438.7	402.4
30°	822.1	696.8	492.2	382.5	344.5
32.5°	791.8	650.2	438.7	329.0	300.5
35°	759.9	602.7	389.4	290.1	273.7
37.5°	727.1	556.1	342.8	264.2	249.6
40°	693.4	509.5	295.3	239.2	228.0
42.5°	658.9	463.7	262.5	218.5	208.1
45°	623.5	419.7	238.3	196.9	188.2
47.5°	585.5	375.6	215.0	178.7	171.0
50°	550.1	333.3	191.7	162.3	156.3
52.5°	512.1	291.9	172.7	147.7	142.5
55°	474.1	252.1	154.6	133.8	129.5
57.5°	436.9	214.1	137.3	120.9	117.4
60°	398.9	183.9	122.6	108.8	105.3
62.5°	360.1	159.7	108.8	97.6	94.1
65°	321.2	137.3	95.0	86.4	83.8
67.5°	280.6	115.7	82.9	76.0	74.3
70°	240.9	96.7	71.7	65.6	63.9
72.5°	202.1	78.6	60.4	56.1	54.4
75°	161.5	63.0	49.2	46.6	45.8
77.5°	126.1	49.2	39.7	38.0	37.1
80°	92.4	36.3	31.1	29.4	28.5
82.5°	61.3	25.0	22.5	21.6	20.7
85°	31.9	15.5	13.8	13.8	13.0
87.5°	10.4	6.9	6.9	6.9	6.0
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	19.94	21.41	20.30	21.72	22.04	14.75	16.21	15.11	16.53	16.84
	3H	22.27	23.59	22.65	23.91	24.28	16.39	17.71	16.77	18.04	18.40
	4H	23.17	24.40	23.57	24.75	25.13	17.03	18.26	17.43	18.61	18.99
	6H	23.83	24.97	24.24	25.34	25.73	17.52	18.66	17.94	19.03	19.42
	8H	24.04	25.12	24.46	25.51	25.91	17.69	18.78	18.12	19.17	19.57
	12H	24.15	25.19	24.58	25.57	26.00	17.81	18.85	18.24	19.23	19.66
4H	2H	19.96	21.19	20.36	21.54	21.92	15.46	16.70	15.86	17.05	17.43
	3H	22.37	23.39	22.78	23.79	24.20	17.31	18.34	17.72	18.74	19.14
	4H	23.30	24.22	23.73	24.64	25.08	18.06	18.98	18.49	19.40	19.84
	6H	24.08	24.88	24.53	25.32	25.78	18.67	19.47	19.13	19.92	20.38
	8H	24.35	25.10	24.81	25.54	26.01	18.89	19.64	19.35	20.08	20.55
	12H	24.52	25.19	25.01	25.67	26.14	19.05	19.72	19.53	20.20	20.67
8H	4H	23.29	24.04	23.76	24.49	24.95	18.44	19.18	18.90	19.63	20.10
	6H	24.10	24.72	24.60	25.21	25.69	19.17	19.79	19.67	20.28	20.76
	8H	24.40	24.95	24.92	25.47	25.95	19.47	20.02	19.98	20.53	21.02
	12H	24.63	25.12	25.14	25.61	26.18	19.71	20.20	20.22	20.70	21.26
12H	4H	23.27	23.94	23.75	24.42	24.89	18.49	19.16	18.98	19.64	20.11
	6H	24.07	24.63	24.59	25.14	25.63	19.26	19.81	19.78	20.33	20.81
	8H	24.41	24.90	24.92	25.39	25.96	19.62	20.10	20.13	20.60	21.16