

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: P1439792

Luminaire Tested: S123DR-H675D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439792  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DR-H675D930-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

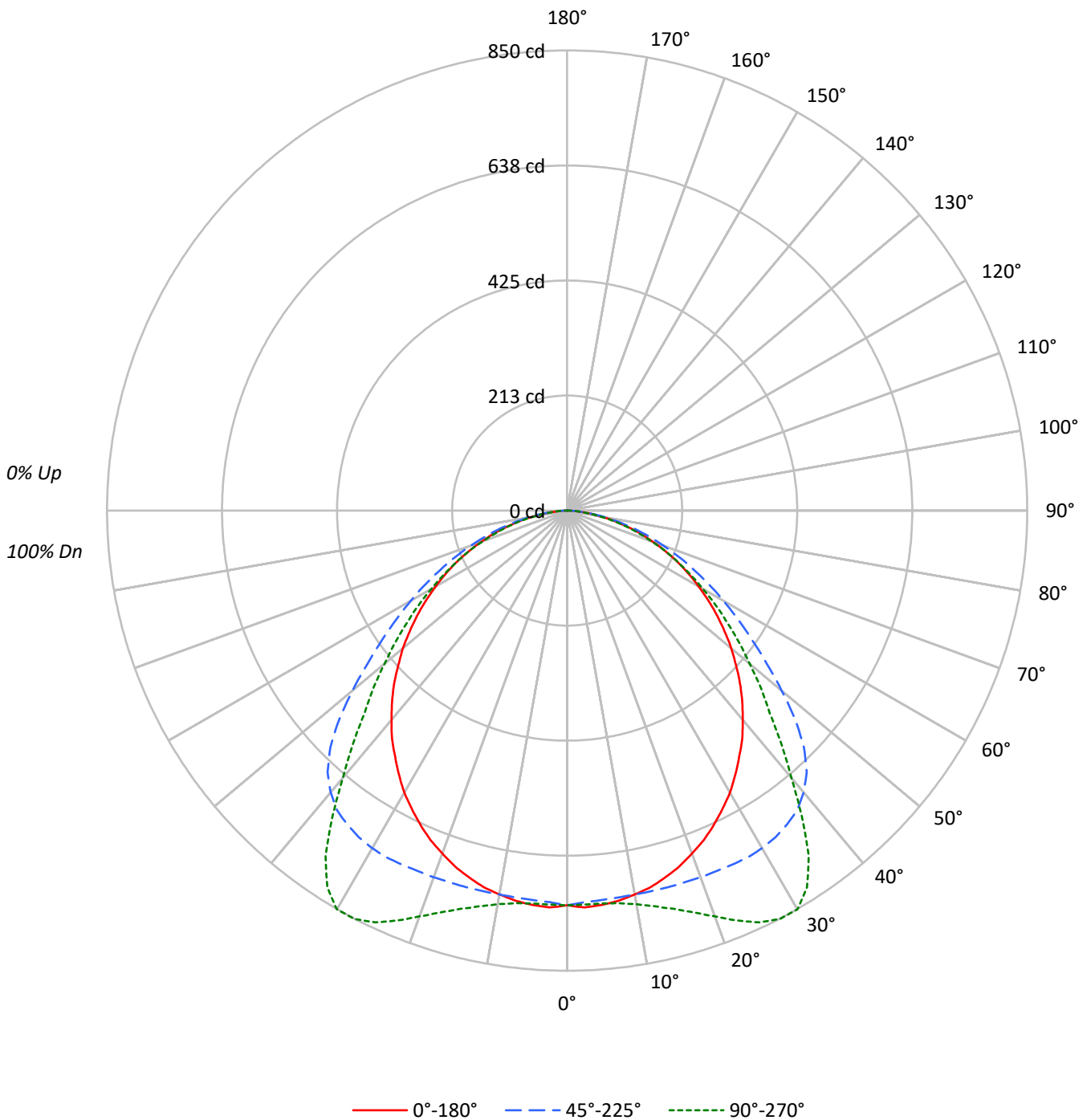
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2205.3 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
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 (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																		
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85																												
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71																												
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60																												
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52																												
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																												
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

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

	0°	45°	90°
0°	8790	8790	8790
5°	8852	8742	8815
10°	8816	8816	9037
15°	8752	8988	9506
20°	8649	9248	10235
25°	8526	9599	11164
30°	8377	10025	11840
35°	8157	10420	11452
40°	7939	10693	10134
45°	7702	10542	9025
50°	7426	9703	8258
55°	7100	8780	7592
60°	6764	8037	6981
65°	6430	7357	6453
70°	5954	6673	5848
75°	5376	5935	5231
80°	4499	4971	4291
85°	3444	3652	3237

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 10542 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.4	3.1
10°-20°	206.3	9.4
20°-30°	338.1	15.3
30°-40°	427.7	19.4
40°-50°	417.9	18.9
50°-60°	343.3	15.6
60°-70°	242.2	11.0
70°-80°	129.1	5.9
80°-90°	31.4	1.4
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°	613.8	27.8
0°-40°	1041.5	47.2
0°-60°	1802.7	81.7
0°-90°	2205.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2205.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	729	729	729	729	729	
5°	731	728	722	730	728	69
15°	701	705	720	752	762	198
25°	641	660	722	809	839	295
35°	554	593	708	790	778	347
45°	452	503	618	558	529	348
55°	338	388	418	376	361	302
65°	225	258	258	235	226	223
75°	115	130	127	115	112	122
85°	25	27	26	24	23	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	729.1	729.1	729.1	729.1	729.1
2.5°	733.7	731.4	723.9	730.6	728.4
5°	731.4	728.4	722.3	729.9	728.4
7.5°	726.9	725.4	720.8	732.1	731.4
10°	720.1	719.3	720.1	736.7	738.2
12.5°	712.5	713.3	720.1	743.5	748.7
15°	701.2	705.0	720.1	752.5	761.6
17.5°	689.2	695.2	720.1	764.6	778.1
20°	674.1	684.6	720.8	777.4	797.7
22.5°	659.0	671.8	720.8	794.7	819.6
25°	640.9	659.8	721.6	809.1	839.2
27.5°	621.3	643.9	722.3	820.4	850.5
30°	601.7	628.8	720.1	824.9	850.5
32.5°	578.3	611.5	715.6	817.4	824.9
35°	554.2	592.7	708.0	790.2	778.1
37.5°	531.6	572.3	698.2	740.4	711.8
40°	504.4	550.4	679.4	677.1	643.9
42.5°	478.8	527.1	655.2	613.0	585.9
45°	451.7	502.9	618.3	558.0	529.3
47.5°	423.0	476.5	571.5	505.9	485.6
50°	395.9	449.4	517.3	458.4	440.3
52.5°	366.5	420.7	465.2	416.2	400.4
55°	337.8	388.3	417.7	375.5	361.2
57.5°	309.1	356.6	374.0	337.0	325.7
60°	280.5	323.5	333.3	301.6	289.5
62.5°	252.6	292.6	295.6	267.7	257.1
65°	225.4	257.9	257.9	235.3	226.2
67.5°	196.8	224.7	223.2	202.1	196.8
70°	168.9	192.3	189.3	171.9	165.9
72.5°	142.5	159.9	157.6	144.0	137.2
75°	115.4	129.7	127.4	115.4	112.3
77.5°	89.7	99.5	97.3	89.0	86.7
80°	64.8	72.4	71.6	65.6	61.8
82.5°	43.7	47.5	46.7	43.0	40.7
85°	24.9	27.1	26.4	24.1	23.4
87.5°	9.8	11.3	12.1	11.3	10.6
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	19.19	20.79	19.55	21.11	21.42	18.92	20.52	19.28	20.84	21.15
	3H	20.76	22.21	21.14	22.53	22.89	20.43	21.88	20.81	22.21	22.57
	4H	21.31	22.67	21.71	23.02	23.40	20.97	22.33	21.37	22.67	23.05
	6H	21.68	22.93	22.09	23.30	23.69	21.33	22.58	21.74	22.95	23.34
	8H	21.77	22.98	22.20	23.36	23.76	21.42	22.62	21.84	23.01	23.41
	12H	21.83	22.98	22.26	23.36	23.79	21.47	22.62	21.90	23.00	23.43
4H	2H	19.83	21.19	20.23	21.54	21.91	19.62	20.98	20.01	21.32	21.70
	3H	21.64	22.77	22.05	23.17	23.57	21.33	22.47	21.74	22.86	23.26
	4H	22.32	23.35	22.76	23.76	24.20	21.97	22.99	22.40	23.41	23.84
	6H	22.81	23.70	23.26	24.14	24.60	22.43	23.32	22.88	23.76	24.22
	8H	22.94	23.77	23.40	24.22	24.68	22.55	23.39	23.02	23.83	24.30
	12H	23.02	23.77	23.50	24.25	24.72	22.64	23.38	23.12	23.86	24.33
8H	4H	22.59	23.42	23.05	23.87	24.33	22.28	23.11	22.74	23.55	24.02
	6H	23.18	23.87	23.67	24.36	24.84	22.84	23.53	23.33	24.02	24.49
	8H	23.37	24.00	23.88	24.50	24.99	23.02	23.64	23.53	24.14	24.63
	12H	23.51	24.06	24.02	24.56	25.12	23.15	23.70	23.65	24.19	24.75
12H	4H	22.61	23.35	23.09	23.83	24.30	22.30	23.05	22.78	23.53	24.00
	6H	23.21	23.83	23.72	24.34	24.83	22.88	23.50	23.39	24.01	24.50
	8H	23.46	24.01	23.96	24.50	25.06	23.11	23.66	23.62	24.15	24.71