

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: P1439760

Luminaire Tested: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439760  
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-H1005D830-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

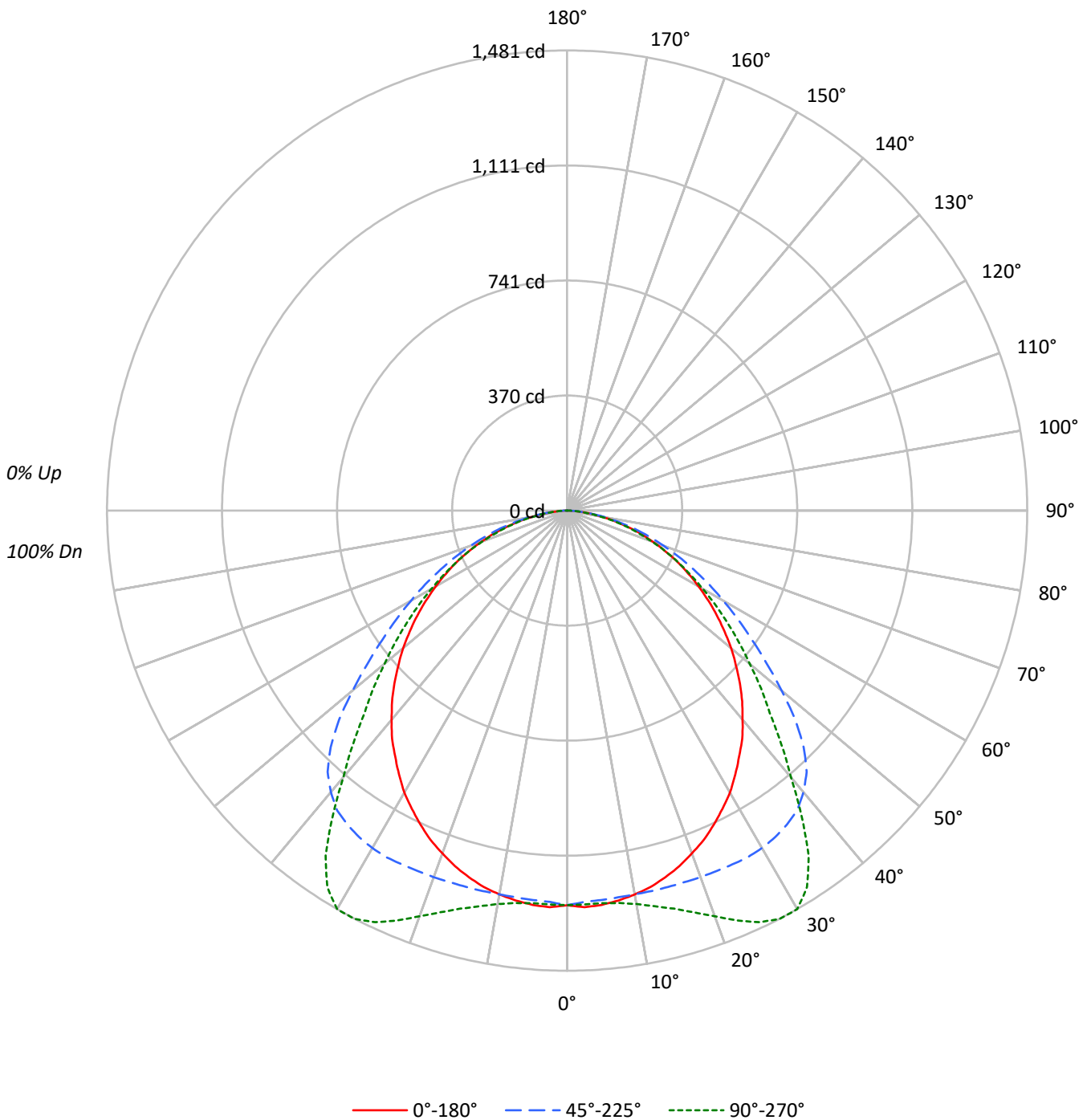
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3840.9 lumens  
Efficiency: N/A  
Efficacy: 104.9 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): 36.6  
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

TEST NUMBER: P1439760

CATALOG NUMBER: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

### Luminous Intensity Polar Plot



TEST NUMBER: P1439760

CATALOG NUMBER: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

**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°	15310	15310	15310
5°	15416	15226	15353
10°	15353	15353	15740
15°	15244	15653	16556
20°	15063	16108	17826
25°	14849	16719	19443
30°	14590	17459	20622
35°	14206	18149	19948
40°	13828	18622	17651
45°	13412	18362	15719
50°	12931	16898	14384
55°	12366	15292	13221
60°	11779	13995	12160
65°	11203	12812	11240
70°	10371	11619	10184
75°	9358	10337	9116
80°	7839	8665	7478
85°	5990	6363	5630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 18362 cd/sqm

TEST NUMBER: P1439760

CATALOG NUMBER: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.9	3.1
10°-20°	359.3	9.4
20°-30°	588.9	15.3
30°-40°	744.9	19.4
40°-50°	727.8	18.9
50°-60°	597.9	15.6
60°-70°	421.7	11.0
70°-80°	224.8	5.9
80°-90°	54.8	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°	1069.1	27.8
0°-40°	1814.0	47.2
0°-60°	3139.6	81.7
0°-90°	3840.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3840.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1270	1270	1270	1270	1270	
5°	1274	1269	1258	1271	1269	121
15°	1221	1228	1254	1311	1326	344
25°	1116	1149	1257	1409	1462	514
35°	965	1032	1233	1376	1355	604
45°	787	876	1077	972	922	606
55°	588	676	728	654	629	526
65°	393	449	449	410	394	388
75°	201	226	222	201	196	213
85°	43	47	46	42	41	53
90°	0	0	0	0	0	



TEST NUMBER: P1439760

CATALOG NUMBER: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1269.9	1269.9	1269.9	1269.9	1269.9
2.5°	1277.8	1273.8	1260.7	1272.5	1268.6
5°	1273.8	1268.6	1258.1	1271.2	1268.6
7.5°	1266.0	1263.3	1255.5	1275.2	1273.8
10°	1254.1	1252.8	1254.1	1283.0	1285.7
12.5°	1241.0	1242.3	1254.1	1294.8	1304.0
15°	1221.3	1227.9	1254.1	1310.6	1326.4
17.5°	1200.3	1210.8	1254.1	1331.6	1355.3
20°	1174.0	1192.4	1255.5	1353.9	1389.4
22.5°	1147.8	1170.1	1255.5	1384.1	1427.5
25°	1116.2	1149.1	1256.8	1409.1	1461.6
27.5°	1082.1	1121.5	1258.1	1428.8	1481.3
30°	1048.0	1095.2	1254.1	1436.7	1481.3
32.5°	1007.3	1065.0	1246.3	1423.5	1436.7
35°	965.2	1032.2	1233.1	1376.3	1355.3
37.5°	925.8	996.7	1216.1	1289.6	1239.7
40°	878.6	958.7	1183.2	1179.3	1121.5
42.5°	833.9	918.0	1141.2	1067.7	1020.4
45°	786.6	875.9	1076.9	971.8	921.9
47.5°	736.7	830.0	995.4	881.2	845.7
50°	689.4	782.7	900.9	798.4	766.9
52.5°	638.2	732.8	810.3	724.9	697.3
55°	588.3	676.3	727.5	654.0	629.0
57.5°	538.4	621.2	651.4	587.0	567.3
60°	488.5	563.4	580.4	525.3	504.3
62.5°	439.9	509.5	514.8	466.2	447.8
65°	392.7	449.1	449.1	409.7	394.0
67.5°	342.8	391.3	388.7	351.9	342.8
70°	294.2	334.9	329.6	299.4	288.9
72.5°	248.2	278.4	274.5	250.8	239.0
75°	200.9	225.9	221.9	200.9	195.7
77.5°	156.3	173.3	169.4	155.0	151.0
80°	112.9	126.1	124.8	114.3	107.7
82.5°	76.2	82.7	81.4	74.9	70.9
85°	43.3	47.3	46.0	42.0	40.7
87.5°	17.1	19.7	21.0	19.7	18.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439760  
 CATALOG NUMBER: S123DR-H1005D830-X4F0-XX-UDD-FLB-W

**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	21.12	22.72	21.48	23.04	23.35	20.84	22.45	21.21	22.76	23.08
	3H	22.69	24.13	23.07	24.46	24.82	22.36	23.81	22.74	24.13	24.49
	4H	23.24	24.60	23.64	24.95	25.32	22.90	24.26	23.29	24.60	24.98
	6H	23.60	24.86	24.02	25.23	25.62	23.25	24.51	23.66	24.88	25.27
	8H	23.70	24.90	24.13	25.29	25.69	23.35	24.55	23.77	24.94	25.34
	12H	23.76	24.91	24.19	25.29	25.72	23.40	24.55	23.83	24.93	25.36
4H	2H	21.76	23.12	22.16	23.46	23.84	21.54	22.90	21.94	23.25	23.63
	3H	23.56	24.70	23.97	25.10	25.50	23.26	24.39	23.67	24.79	25.19
	4H	24.25	25.28	24.68	25.69	26.13	23.90	24.92	24.33	25.33	25.77
	6H	24.73	25.63	25.19	26.07	26.52	24.36	25.25	24.81	25.69	26.15
	8H	24.87	25.70	25.33	26.14	26.61	24.48	25.32	24.94	25.76	26.23
	12H	24.95	25.70	25.43	26.18	26.65	24.56	25.31	25.04	25.79	26.26
8H	4H	24.52	25.35	24.98	25.79	26.26	24.20	25.04	24.66	25.48	25.95
	6H	25.11	25.80	25.60	26.29	26.77	24.76	25.46	25.26	25.95	26.42
	8H	25.30	25.92	25.81	26.43	26.92	24.94	25.57	25.45	26.07	26.56
	12H	25.44	25.99	25.95	26.48	27.04	25.07	25.62	25.58	26.11	26.68
12H	4H	24.53	25.28	25.01	25.76	26.23	24.23	24.98	24.71	25.46	25.93
	6H	25.14	25.76	25.65	26.27	26.76	24.81	25.43	25.32	25.94	26.42
	8H	25.38	25.93	25.89	26.42	26.99	25.04	25.59	25.55	26.08	26.64