

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: P1439805

Luminaire Tested: S123DR-S1005D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439805
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-S1005D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

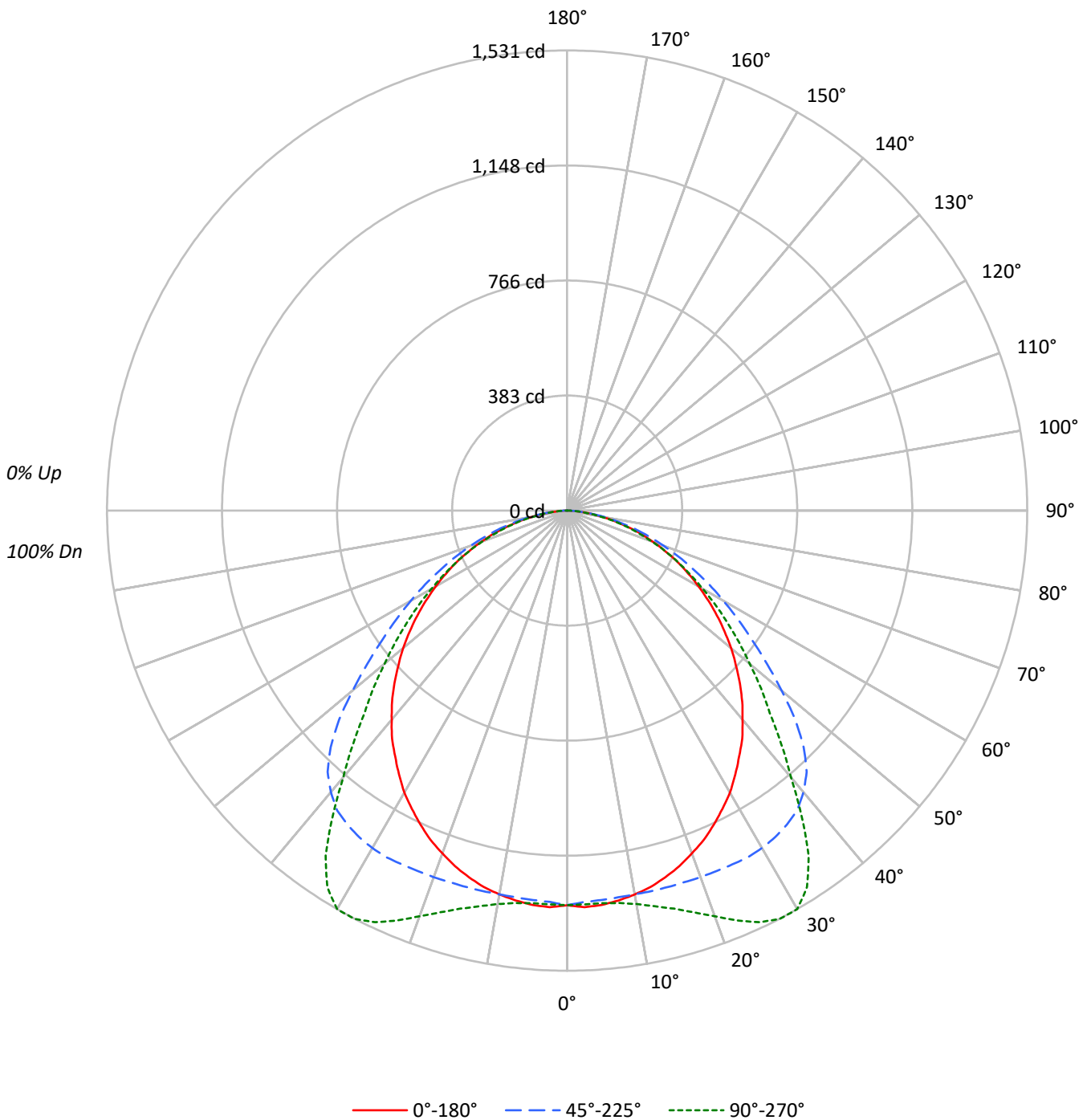
Lumens per Lamp: N/A
Luminaire Lumens: 3970.6 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): 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: P1439805

CATALOG NUMBER: S123DR-S1005D830-X4F0-XX-UDD-FLB-W

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	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°	15828	15828	15828
5°	15938	15740	15871
10°	15872	15872	16271
15°	15759	16183	17115
20°	15572	16652	18428
25°	15350	17283	20100
30°	15083	18049	21319
35°	14686	18763	20620
40°	14294	19251	18247
45°	13865	18980	16249
50°	13368	17468	14870
55°	12784	15809	13669
60°	12177	14470	12570
65°	11579	13245	11619
70°	10720	12013	10529
75°	9675	10686	9424
80°	8109	8956	7728
85°	6197	6571	5824

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18980 cd/sqm



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CATALOG NUMBER: S123DR-S1005D830-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	3.1
10°-20°	371.4	9.4
20°-30°	608.8	15.3
30°-40°	770.1	19.4
40°-50°	752.3	18.9
50°-60°	618.1	15.6
60°-70°	436.0	11.0
70°-80°	232.4	5.9
80°-90°	56.6	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°	1105.2	27.8
0°-40°	1875.3	47.2
0°-60°	3245.7	81.7
0°-90°	3970.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3970.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1313	1313	1313	1313	1313	
5°	1317	1311	1301	1314	1311	125
15°	1263	1269	1296	1355	1371	356
25°	1154	1188	1299	1457	1511	531
35°	998	1067	1275	1423	1401	625
45°	813	906	1113	1005	953	627
55°	608	699	752	676	650	544
65°	406	464	464	424	407	401
75°	208	234	229	208	202	220
85°	45	49	48	43	42	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1312.8	1312.8	1312.8	1312.8	1312.8
2.5°	1320.9	1316.9	1303.3	1315.5	1311.4
5°	1316.9	1311.4	1300.6	1314.1	1311.4
7.5°	1308.7	1306.0	1297.9	1318.2	1316.9
10°	1296.5	1295.1	1296.5	1326.4	1329.1
12.5°	1282.9	1284.3	1296.5	1338.6	1348.1
15°	1262.6	1269.3	1296.5	1354.9	1371.2
17.5°	1240.8	1251.7	1296.5	1376.6	1401.0
20°	1213.7	1232.7	1297.9	1399.7	1436.3
22.5°	1186.5	1209.6	1297.9	1430.9	1475.7
25°	1153.9	1187.9	1299.2	1456.7	1511.0
27.5°	1118.7	1159.4	1300.6	1477.1	1531.4
30°	1083.4	1132.2	1296.5	1485.2	1531.4
32.5°	1041.3	1101.0	1288.3	1471.6	1485.2
35°	997.8	1067.1	1274.8	1422.7	1401.0
37.5°	957.1	1030.4	1257.1	1333.1	1281.6
40°	908.2	991.0	1223.2	1219.1	1159.4
42.5°	862.1	949.0	1179.7	1103.7	1054.8
45°	813.2	905.5	1113.2	1004.6	953.0
47.5°	761.6	858.0	1029.1	910.9	874.3
50°	712.7	809.1	931.3	825.4	792.8
52.5°	659.8	757.5	837.6	749.4	720.9
55°	608.2	699.2	752.1	676.1	650.3
57.5°	556.6	642.1	673.4	606.8	586.5
60°	505.0	582.4	600.1	543.0	521.3
62.5°	454.8	526.7	532.2	481.9	462.9
65°	405.9	464.3	464.3	423.6	407.3
67.5°	354.3	404.6	401.8	363.8	354.3
70°	304.1	346.2	340.8	309.5	298.7
72.5°	256.6	287.8	283.7	259.3	247.1
75°	207.7	233.5	229.4	207.7	202.3
77.5°	161.6	179.2	175.1	160.2	156.1
80°	116.8	130.3	129.0	118.1	111.3
82.5°	78.7	85.5	84.2	77.4	73.3
85°	44.8	48.9	47.5	43.4	42.1
87.5°	17.6	20.4	21.7	20.4	19.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1439805

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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	21.23	22.84	21.60	23.15	23.47	20.96	22.57	21.33	22.88	23.19
	3H	22.80	24.25	23.18	24.58	24.94	22.48	23.92	22.85	24.25	24.61
	4H	23.35	24.71	23.75	25.06	25.44	23.01	24.37	23.41	24.72	25.09
	6H	23.72	24.98	24.13	25.34	25.73	23.37	24.63	23.78	24.99	25.38
	8H	23.82	25.02	24.24	25.41	25.81	23.46	24.66	23.89	25.05	25.45
	12H	23.87	25.02	24.30	25.41	25.83	23.51	24.66	23.94	25.05	25.47
4H	2H	21.87	23.23	22.27	23.58	23.96	21.66	23.02	22.06	23.37	23.74
	3H	23.68	24.81	24.09	25.21	25.61	23.37	24.51	23.78	24.91	25.31
	4H	24.37	25.39	24.80	25.81	26.24	24.01	25.04	24.44	25.45	25.89
	6H	24.85	25.74	25.30	26.18	26.64	24.47	25.36	24.93	25.81	26.26
	8H	24.98	25.82	25.44	26.26	26.73	24.60	25.43	25.06	25.88	26.34
	12H	25.07	25.82	25.55	26.29	26.76	24.68	25.43	25.16	25.90	26.37
8H	4H	24.63	25.47	25.09	25.91	26.38	24.32	25.15	24.78	25.60	26.06
	6H	25.22	25.92	25.72	26.40	26.88	24.88	25.57	25.37	26.06	26.54
	8H	25.42	26.04	25.93	26.55	27.03	25.06	25.68	25.57	26.19	26.67
	12H	25.56	26.11	26.07	26.60	27.16	25.19	25.74	25.70	26.23	26.79
12H	4H	24.65	25.40	25.13	25.87	26.34	24.35	25.09	24.83	25.57	26.04
	6H	25.25	25.88	25.77	26.38	26.87	24.92	25.55	25.43	26.05	26.54
	8H	25.50	26.05	26.01	26.54	27.10	25.15	25.70	25.66	26.19	26.76