

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: P1439813

Luminaire Tested: S123DR-S1005D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439813
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-S1005D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

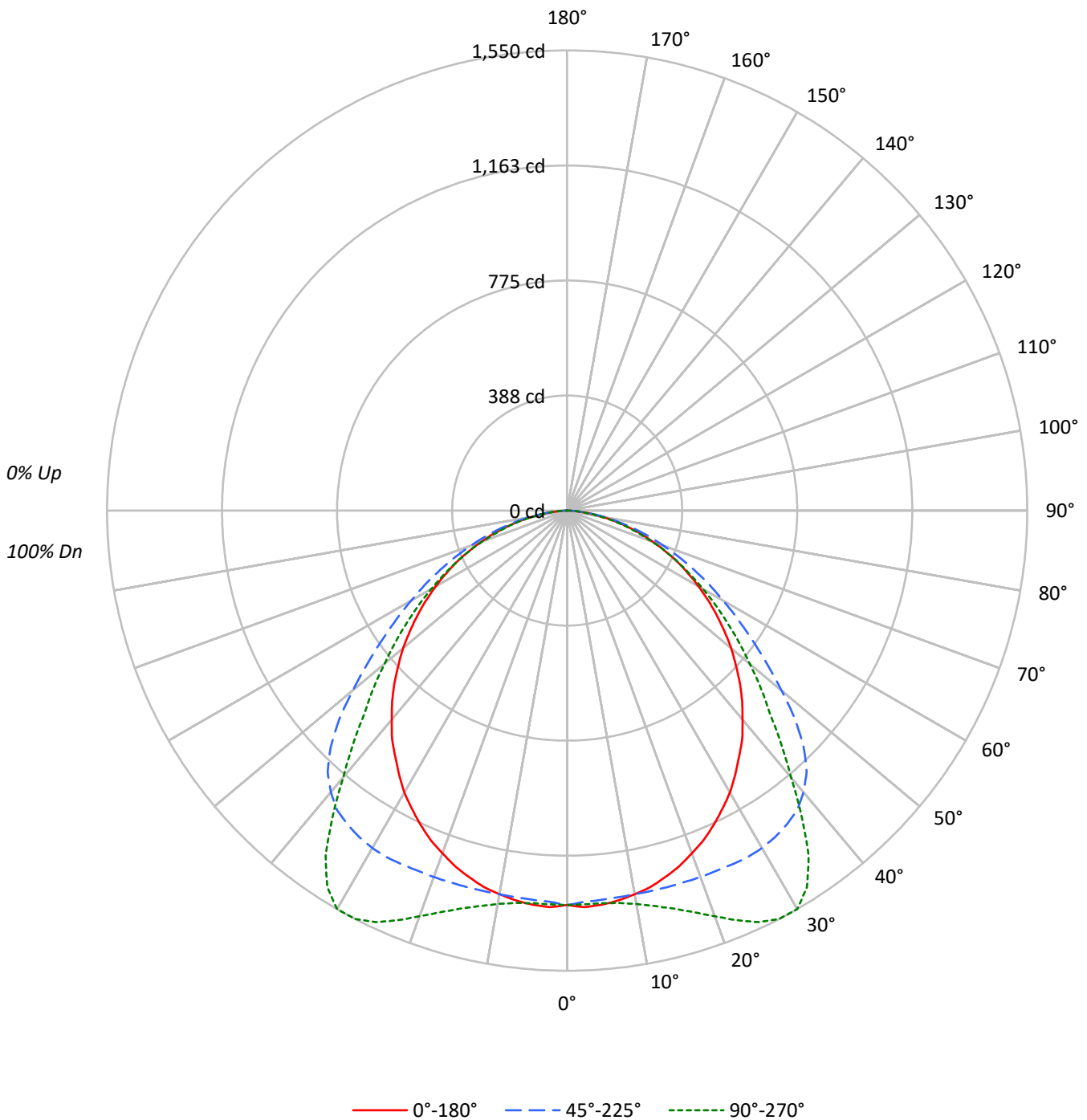
Lumens per Lamp: N/A
Luminaire Lumens: 4018.9 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	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°	16019	16019	16019
5°	16131	15932	16065
10°	16066	16066	16468
15°	15950	16380	17322
20°	15761	16854	18652
25°	15538	17493	20345
30°	15265	18269	21578
35°	14865	18991	20872
40°	14468	19486	18469
45°	14034	19212	16447
50°	13531	17680	15052
55°	12940	16000	13835
60°	12326	14644	12724
65°	11722	13405	11759
70°	10850	12158	10656
75°	9792	10816	9535
80°	8207	9061	7825
85°	6266	6654	5893

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 19212 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.5	3.1
10°-20°	376.0	9.4
20°-30°	616.2	15.3
30°-40°	779.4	19.4
40°-50°	761.5	18.9
50°-60°	625.6	15.6
60°-70°	441.2	11.0
70°-80°	235.2	5.9
80°-90°	57.3	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°	1118.6	27.8
0°-40°	1898.1	47.2
0°-60°	3285.1	81.7
0°-90°	4018.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4018.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1333	1327	1316	1330	1327	127
15°	1278	1285	1312	1371	1388	360
25°	1168	1202	1315	1474	1529	538
35°	1010	1080	1290	1440	1418	632
45°	823	916	1127	1017	965	634
55°	616	708	761	684	658	551
65°	411	470	470	429	412	406
75°	210	236	232	210	205	223
85°	45	50	48	44	43	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.7	1328.7	1328.7	1328.7	1328.7
2.5°	1337.0	1332.9	1319.1	1331.5	1327.4
5°	1332.9	1327.4	1316.4	1330.1	1327.4
7.5°	1324.6	1321.9	1313.6	1334.2	1332.9
10°	1312.3	1310.9	1312.3	1342.5	1345.2
12.5°	1298.5	1299.9	1312.3	1354.9	1364.5
15°	1277.9	1284.8	1312.3	1371.3	1387.8
17.5°	1255.9	1266.9	1312.3	1393.3	1418.1
20°	1228.4	1247.7	1313.6	1416.7	1453.8
22.5°	1201.0	1224.3	1313.6	1448.3	1493.6
25°	1168.0	1202.3	1315.0	1474.4	1529.4
27.5°	1132.2	1173.5	1316.4	1495.0	1550.0
30°	1096.5	1146.0	1312.3	1503.3	1550.0
32.5°	1053.9	1114.4	1304.0	1489.5	1503.3
35°	1010.0	1080.0	1290.3	1440.0	1418.1
37.5°	968.7	1042.9	1272.4	1349.4	1297.1
40°	919.3	1003.1	1238.1	1233.9	1173.5
42.5°	872.5	960.5	1194.1	1117.1	1067.7
45°	823.1	916.5	1126.8	1016.8	964.6
47.5°	770.9	868.4	1041.6	922.0	884.9
50°	721.4	819.0	942.6	835.4	802.5
52.5°	667.8	766.7	847.8	758.5	729.6
55°	615.6	707.7	761.2	684.3	658.2
57.5°	563.4	649.9	681.5	614.2	593.6
60°	511.2	589.5	607.3	549.6	527.7
62.5°	460.3	533.1	538.6	487.8	468.6
65°	410.9	469.9	469.9	428.7	412.2
67.5°	358.6	409.5	406.7	368.3	358.6
70°	307.8	350.4	344.9	313.3	302.3
72.5°	259.7	291.3	287.2	262.5	250.1
75°	210.2	236.3	232.2	210.2	204.7
77.5°	163.5	181.4	177.3	162.1	158.0
80°	118.2	131.9	130.5	119.5	112.7
82.5°	79.7	86.6	85.2	78.3	74.2
85°	45.3	49.5	48.1	44.0	42.6
87.5°	17.9	20.6	22.0	20.6	19.2
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	21.27	22.88	21.64	23.19	23.51	21.00	22.61	21.37	22.92	23.24
	3H	22.85	24.29	23.22	24.62	24.98	22.52	23.96	22.89	24.29	24.65
	4H	23.40	24.76	23.80	25.10	25.48	23.05	24.41	23.45	24.76	25.14
	6H	23.76	25.02	24.17	25.38	25.78	23.41	24.67	23.82	25.03	25.43
	8H	23.86	25.06	24.29	25.45	25.85	23.50	24.71	23.93	25.09	25.49
	12H	23.92	25.07	24.34	25.45	25.88	23.56	24.71	23.99	25.09	25.52
4H	2H	21.91	23.27	22.31	23.62	24.00	21.70	23.06	22.10	23.41	23.78
	3H	23.72	24.86	24.13	25.25	25.65	23.42	24.55	23.83	24.95	25.35
	4H	24.41	25.43	24.84	25.85	26.28	24.05	25.08	24.49	25.49	25.93
	6H	24.89	25.78	25.34	26.22	26.68	24.51	25.41	24.97	25.85	26.30
	8H	25.02	25.86	25.48	26.30	26.77	24.64	25.47	25.10	25.92	26.38
	12H	25.11	25.86	25.59	26.33	26.80	24.72	25.47	25.20	25.94	26.41
8H	4H	24.67	25.51	25.14	25.95	26.42	24.36	25.20	24.82	25.64	26.10
	6H	25.27	25.96	25.76	26.45	26.92	24.92	25.61	25.42	26.10	26.58
	8H	25.46	26.08	25.97	26.59	27.07	25.10	25.72	25.61	26.23	26.72
	12H	25.60	26.15	26.11	26.64	27.20	25.23	25.78	25.74	26.27	26.83
12H	4H	24.69	25.44	25.17	25.92	26.39	24.39	25.14	24.87	25.61	26.08
	6H	25.30	25.92	25.81	26.43	26.91	24.97	25.59	25.48	26.10	26.58
	8H	25.54	26.09	26.05	26.58	27.14	25.19	25.74	25.70	26.24	26.80