

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: P1439768

Luminaire Tested: S123DR-H1005D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439768
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-H1005D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

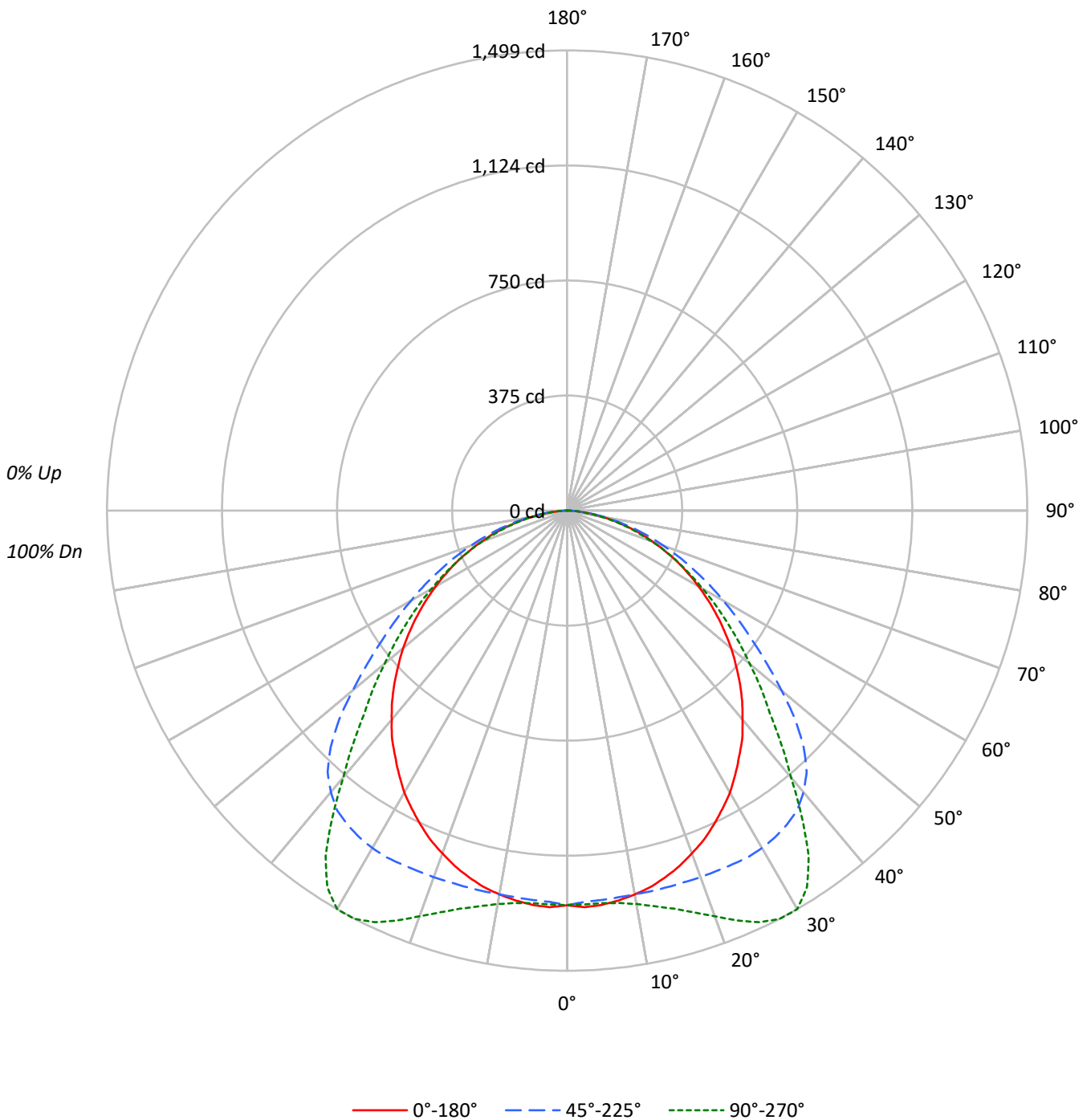
Lumens per Lamp: N/A
Luminaire Lumens: 3887.6 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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°	15496	15496	15496
5°	15604	15411	15540
10°	15540	15540	15931
15°	15430	15844	16757
20°	15246	16303	18043
25°	15029	16921	19680
30°	14767	17672	20873
35°	14380	18370	20189
40°	13995	18848	17865
45°	13575	18583	15910
50°	13088	17102	14561
55°	12517	15479	13383
60°	11924	14166	12307
65°	11337	12969	11377
70°	10494	11760	10307
75°	9475	10462	9228
80°	7936	8769	7568
85°	6073	6432	5699

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18583 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	3.1
10°-20°	363.7	9.4
20°-30°	596.0	15.3
30°-40°	754.0	19.4
40°-50°	736.6	18.9
50°-60°	605.1	15.6
60°-70°	426.8	11.0
70°-80°	227.5	5.9
80°-90°	55.4	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°	1082.1	27.8
0°-40°	1836.0	47.2
0°-60°	3177.8	81.7
0°-90°	3887.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3887.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1289	1284	1273	1287	1284	122
15°	1236	1243	1269	1326	1342	349
25°	1130	1163	1272	1426	1479	520
35°	977	1045	1248	1393	1372	612
45°	796	887	1090	984	933	614
55°	596	684	736	662	637	533
65°	397	455	455	415	399	392
75°	203	229	225	203	198	216
85°	44	48	46	42	41	53
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1285.3	1285.3	1285.3	1285.3	1285.3
2.5°	1293.3	1289.3	1276.0	1288.0	1284.0
5°	1289.3	1284.0	1273.4	1286.7	1284.0
7.5°	1281.3	1278.7	1270.7	1290.7	1289.3
10°	1269.4	1268.1	1269.4	1298.6	1301.3
12.5°	1256.1	1257.4	1269.4	1310.6	1319.9
15°	1236.2	1242.8	1269.4	1326.5	1342.5
17.5°	1214.9	1225.5	1269.4	1347.8	1371.7
20°	1188.3	1206.9	1270.7	1370.4	1406.3
22.5°	1161.7	1184.3	1270.7	1401.0	1444.8
25°	1129.8	1163.0	1272.0	1426.2	1479.4
27.5°	1095.3	1135.1	1273.4	1446.2	1499.3
30°	1060.7	1108.6	1269.4	1454.1	1499.3
32.5°	1019.5	1078.0	1261.4	1440.9	1454.1
35°	977.0	1044.7	1248.1	1393.0	1371.7
37.5°	937.1	1008.9	1230.8	1305.3	1254.8
40°	889.2	970.3	1197.6	1193.6	1135.1
42.5°	844.0	929.1	1155.1	1080.6	1032.8
45°	796.2	886.6	1089.9	983.6	933.1
47.5°	745.7	840.1	1007.5	891.9	856.0
50°	697.8	792.2	911.8	808.2	776.3
52.5°	646.0	741.7	820.1	733.7	705.8
55°	595.5	684.5	736.4	661.9	636.7
57.5°	545.0	628.7	659.3	594.2	574.2
60°	494.5	570.2	587.5	531.7	510.4
62.5°	445.3	515.7	521.0	471.9	453.3
65°	397.4	454.6	454.6	414.7	398.8
67.5°	346.9	396.1	393.4	356.2	346.9
70°	297.7	338.9	333.6	303.1	292.4
72.5°	251.2	281.8	277.8	253.9	241.9
75°	203.4	228.6	224.6	203.4	198.1
77.5°	158.2	175.5	171.5	156.8	152.9
80°	114.3	127.6	126.3	115.6	109.0
82.5°	77.1	83.7	82.4	75.8	71.8
85°	43.9	47.9	46.5	42.5	41.2
87.5°	17.3	19.9	21.3	19.9	18.6
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	21.16	22.76	21.52	23.08	23.39	20.89	22.49	21.25	22.81	23.12
	3H	22.73	24.18	23.11	24.50	24.86	22.40	23.85	22.78	24.18	24.54
	4H	23.28	24.64	23.68	24.99	25.37	22.94	24.30	23.34	24.65	25.02
	6H	23.65	24.90	24.06	25.27	25.66	23.30	24.55	23.71	24.92	25.31
	8H	23.75	24.95	24.17	25.34	25.73	23.39	24.59	23.81	24.98	25.38
	12H	23.80	24.95	24.23	25.33	25.76	23.44	24.59	23.87	24.97	25.40
4H	2H	21.80	23.16	22.20	23.51	23.88	21.59	22.95	21.98	23.29	23.67
	3H	23.61	24.74	24.02	25.14	25.54	23.30	24.44	23.71	24.83	25.23
	4H	24.29	25.32	24.73	25.73	26.17	23.94	24.96	24.37	25.38	25.81
	6H	24.77	25.67	25.23	26.11	26.57	24.40	25.29	24.85	25.73	26.19
	8H	24.91	25.74	25.37	26.19	26.65	24.52	25.36	24.99	25.80	26.27
	12H	24.99	25.74	25.47	26.22	26.69	24.61	25.35	25.09	25.83	26.30
8H	4H	24.56	25.39	25.02	25.84	26.30	24.25	25.08	24.71	25.52	25.99
	6H	25.15	25.84	25.64	26.33	26.81	24.81	25.50	25.30	25.99	26.46
	8H	25.34	25.97	25.85	26.47	26.96	24.99	25.61	25.50	26.11	26.60
	12H	25.48	26.03	25.99	26.53	27.09	25.12	25.67	25.62	26.16	26.72
12H	4H	24.58	25.32	25.06	25.80	26.27	24.27	25.02	24.75	25.50	25.97
	6H	25.18	25.80	25.69	26.31	26.80	24.85	25.47	25.36	25.98	26.47
	8H	25.43	25.98	25.93	26.47	27.03	25.08	25.63	25.59	26.12	26.68