

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: P1439947

Luminaire Tested: S124DR-S1005D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439947
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-S1005D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

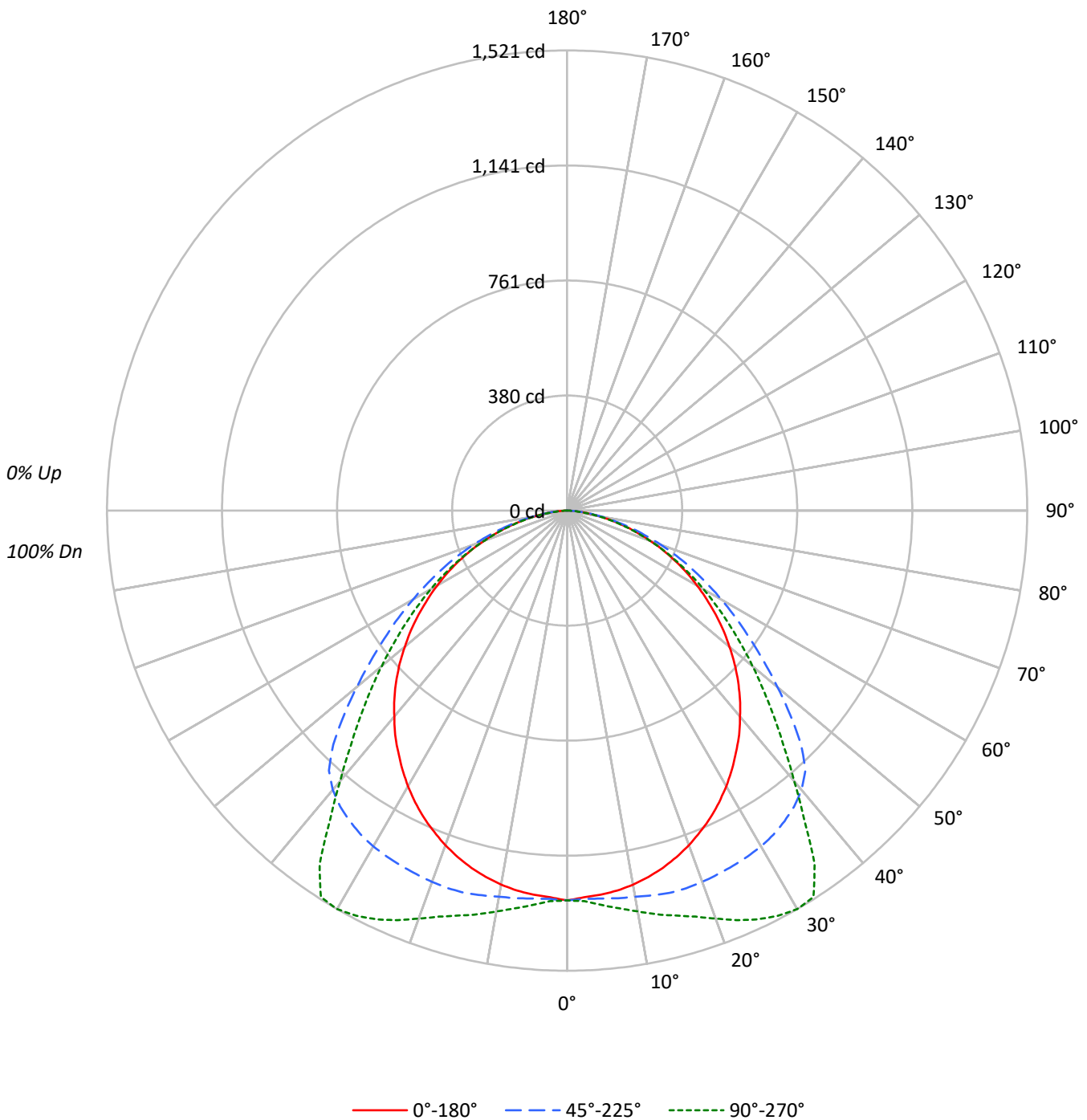
Lumens per Lamp: N/A
Luminaire Lumens: 3915.5 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1439947

CATALOG NUMBER: S124DR-S1005D940-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	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	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°	11391	11391	11391
5°	11311	11423	11614
10°	11272	11635	12078
15°	11191	11978	12684
20°	11075	12289	13502
25°	10928	12643	14542
30°	10739	13089	15528
35°	10508	13524	15393
40°	10258	13906	13469
45°	9992	13675	12110
50°	9635	12487	11008
55°	9238	11362	10056
60°	8787	10419	9211
65°	8253	9496	8412
70°	7551	8497	7517
75°	6651	7300	6521
80°	5473	5860	5280
85°	3845	3977	3591

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13675 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	3.2
10°-20°	370.5	9.5
20°-30°	603.0	15.4
30°-40°	765.8	19.6
40°-50°	746.2	19.1
50°-60°	611.8	15.6
60°-70°	426.9	10.9
70°-80°	219.1	5.6
80°-90°	48.6	1.2
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°	1097.1	28.0
0°-40°	1862.9	47.6
0°-60°	3220.9	82.3
0°-90°	3915.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3915.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1274	1293	1287	1296	1309	121
15°	1223	1261	1309	1360	1386	345
25°	1120	1192	1296	1430	1491	516
35°	974	1068	1253	1435	1426	609
45°	799	898	1094	1003	968	616
55°	599	692	737	675	652	536
65°	394	451	454	417	402	391
75°	195	216	214	198	191	207
85°	38	39	39	37	35	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.4	1288.4	1288.4	1288.4	1288.4
2.5°	1279.5	1296.0	1284.6	1289.6	1292.2
5°	1274.5	1293.4	1287.1	1296.0	1308.6
7.5°	1266.9	1288.4	1292.2	1309.9	1326.3
10°	1255.5	1280.8	1296.0	1326.3	1345.3
12.5°	1240.3	1271.9	1302.3	1344.0	1366.8
15°	1222.6	1260.6	1308.6	1360.4	1385.7
17.5°	1201.1	1246.7	1308.6	1373.1	1407.2
20°	1177.1	1230.2	1306.1	1389.5	1435.0
22.5°	1149.3	1212.5	1301.0	1408.5	1465.4
25°	1120.2	1192.3	1296.0	1430.0	1490.7
27.5°	1087.3	1168.3	1289.6	1446.4	1509.6
30°	1051.9	1139.2	1282.1	1454.0	1521.0
32.5°	1014.0	1105.0	1269.4	1454.0	1514.7
35°	973.6	1068.4	1253.0	1435.0	1426.2
37.5°	934.4	1029.2	1232.7	1342.7	1287.1
40°	888.8	987.5	1204.9	1212.5	1167.0
42.5°	845.9	943.2	1165.7	1102.5	1062.1
45°	799.1	897.7	1093.7	1002.6	968.5
47.5°	751.0	848.4	1000.1	912.9	881.3
50°	700.5	799.1	907.8	828.2	800.3
52.5°	651.1	746.0	819.3	749.8	723.2
55°	599.3	691.6	737.1	675.2	652.4
57.5°	547.5	636.0	662.5	605.6	584.1
60°	496.9	576.5	589.2	539.9	520.9
62.5°	446.3	514.6	519.6	476.7	460.2
65°	394.5	451.4	453.9	417.2	402.1
67.5°	343.9	390.7	390.7	359.1	346.4
70°	292.1	331.3	328.7	303.4	290.8
72.5°	242.8	270.6	268.0	249.1	240.2
75°	194.7	216.2	213.7	198.5	190.9
77.5°	149.2	164.4	161.8	151.7	145.4
80°	107.5	116.3	115.1	107.5	103.7
82.5°	70.8	75.9	73.3	68.3	65.7
85°	37.9	39.2	39.2	36.7	35.4
87.5°	13.9	13.9	13.9	13.9	12.6
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	20.14	21.74	20.50	22.05	22.36	19.92	21.52	20.29	21.83	22.15
	3H	21.64	23.08	22.02	23.41	23.77	21.39	22.83	21.77	23.16	23.52
	4H	22.14	23.50	22.54	23.84	24.22	21.89	23.24	22.29	23.59	23.97
	6H	22.46	23.72	22.88	24.08	24.47	22.20	23.46	22.62	23.82	24.21
	8H	22.55	23.74	22.97	24.13	24.53	22.28	23.47	22.71	23.86	24.26
	12H	22.59	23.73	23.02	24.11	24.54	22.31	23.46	22.74	23.84	24.27
4H	2H	20.76	22.11	21.16	22.46	22.84	20.59	21.94	20.99	22.29	22.67
	3H	22.49	23.62	22.90	24.01	24.41	22.26	23.38	22.67	23.78	24.18
	4H	23.12	24.13	23.55	24.55	24.98	22.85	23.87	23.29	24.28	24.72
	6H	23.54	24.43	24.00	24.87	25.33	23.27	24.15	23.72	24.59	25.05
	8H	23.66	24.48	24.12	24.93	25.39	23.37	24.20	23.83	24.64	25.11
	12H	23.72	24.46	24.20	24.94	25.41	23.43	24.17	23.91	24.65	25.12
8H	4H	23.36	24.19	23.82	24.63	25.10	23.13	23.95	23.59	24.40	24.86
	6H	23.88	24.57	24.38	25.06	25.53	23.63	24.31	24.12	24.80	25.28
	8H	24.05	24.66	24.56	25.17	25.66	23.77	24.39	24.29	24.90	25.38
	12H	24.16	24.70	24.66	25.19	25.75	23.87	24.42	24.38	24.91	25.47
12H	4H	23.37	24.11	23.85	24.59	25.06	23.14	23.89	23.62	24.36	24.83
	6H	23.90	24.52	24.41	25.03	25.51	23.66	24.27	24.17	24.78	25.27
	8H	24.11	24.66	24.62	25.15	25.71	23.85	24.39	24.36	24.88	25.45