

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: P1439902

Luminaire Tested: S124DR-H1005D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439902
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-H1005D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

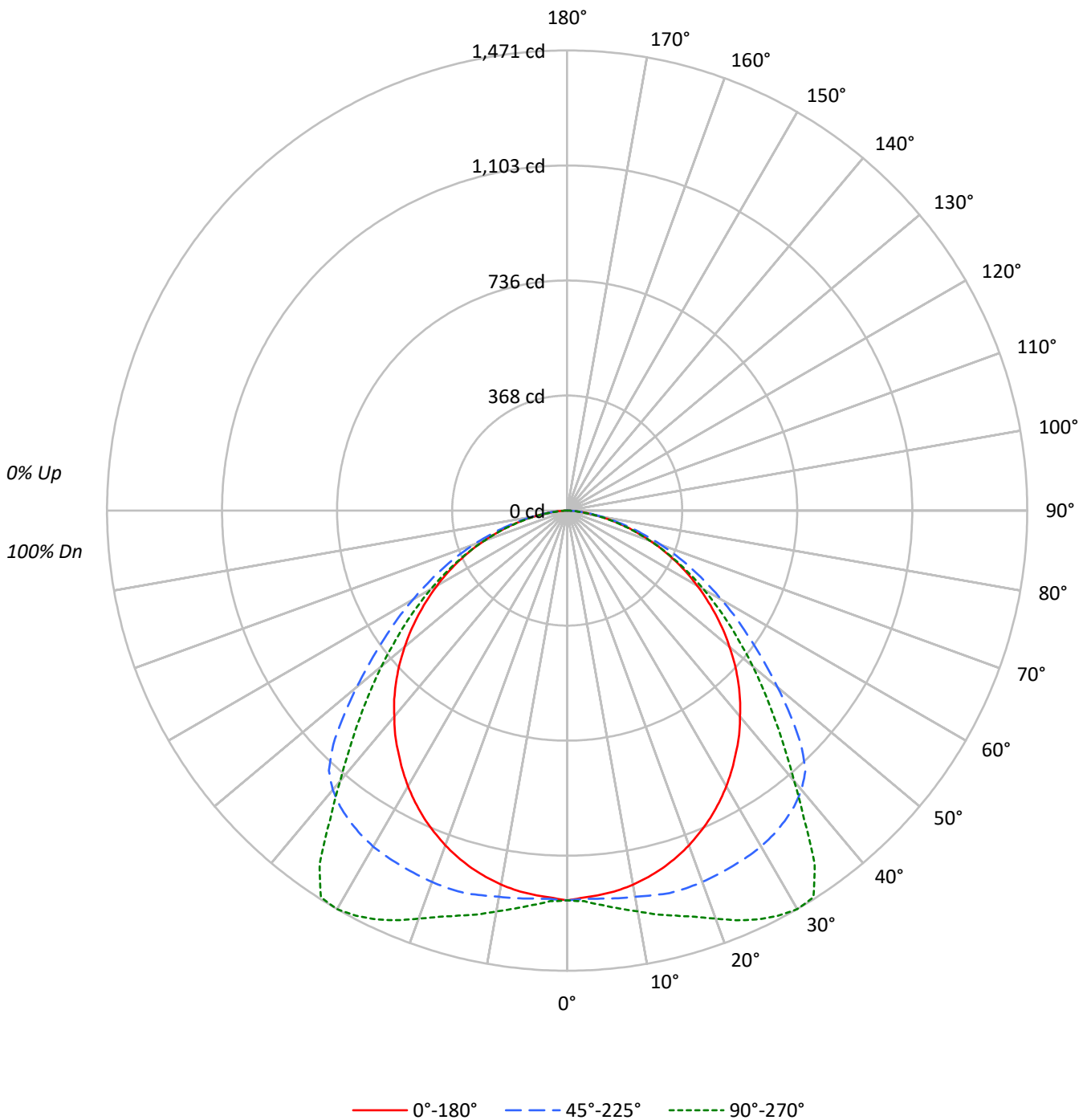
Lumens per Lamp: N/A
Luminaire Lumens: 3787.6 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	11019	11019	11019
5°	10941	11050	11235
10°	10904	11255	11683
15°	10826	11587	12270
20°	10714	11887	13061
25°	10571	12229	14067
30°	10389	12661	15021
35°	10164	13082	14890
40°	9923	13453	13029
45°	9665	13228	11715
50°	9320	12078	10649
55°	8936	10991	9728
60°	8500	10077	8910
65°	7983	9186	8136
70°	7303	8220	7272
75°	6432	7061	6309
80°	5295	5667	5107
85°	3723	3845	3469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13228 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	3.2
10°-20°	358.4	9.5
20°-30°	583.3	15.4
30°-40°	740.8	19.6
40°-50°	721.8	19.1
50°-60°	591.8	15.6
60°-70°	412.9	10.9
70°-80°	211.9	5.6
80°-90°	47.0	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°	1061.3	28.0
0°-40°	1802.1	47.6
0°-60°	3115.7	82.3
0°-90°	3787.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3787.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1246	1246	1246	1246	1246	
5°	1233	1251	1245	1254	1266	117
15°	1183	1219	1266	1316	1340	333
25°	1084	1153	1254	1383	1442	499
35°	942	1034	1212	1388	1380	589
45°	773	868	1058	970	937	596
55°	580	669	713	653	631	518
65°	382	437	439	404	389	378
75°	188	209	207	192	185	200
85°	37	38	38	36	34	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1246.3	1246.3	1246.3	1246.3	1246.3
2.5°	1237.7	1253.6	1242.6	1247.5	1250.0
5°	1232.8	1251.2	1245.1	1253.6	1265.9
7.5°	1225.5	1246.3	1250.0	1267.1	1283.0
10°	1214.5	1238.9	1253.6	1283.0	1301.3
12.5°	1199.8	1230.4	1259.7	1300.1	1322.1
15°	1182.7	1219.4	1265.9	1316.0	1340.5
17.5°	1161.9	1205.9	1265.9	1328.2	1361.3
20°	1138.7	1190.0	1263.4	1344.1	1388.2
22.5°	1111.8	1172.9	1258.5	1362.5	1417.5
25°	1083.6	1153.3	1253.6	1383.3	1442.0
27.5°	1051.8	1130.1	1247.5	1399.2	1460.3
30°	1017.6	1102.0	1240.2	1406.5	1471.3
32.5°	980.9	1068.9	1227.9	1406.5	1465.2
35°	941.7	1033.5	1212.0	1388.2	1379.6
37.5°	903.8	995.6	1192.5	1298.9	1245.1
40°	859.8	955.2	1165.6	1172.9	1128.9
42.5°	818.2	912.4	1127.7	1066.5	1027.4
45°	773.0	868.4	1057.9	969.9	936.9
47.5°	726.5	820.7	967.4	883.0	852.5
50°	677.6	773.0	878.1	801.1	774.2
52.5°	629.9	721.6	792.5	725.3	699.6
55°	579.7	669.0	713.0	653.1	631.1
57.5°	529.6	615.2	640.9	585.8	565.0
60°	480.7	557.7	569.9	522.2	503.9
62.5°	431.7	497.8	502.7	461.1	445.2
65°	381.6	436.6	439.1	403.6	388.9
67.5°	332.7	377.9	377.9	347.3	335.1
70°	282.5	320.4	318.0	293.5	281.3
72.5°	234.8	261.7	259.3	240.9	232.4
75°	188.3	209.1	206.7	192.0	184.7
77.5°	144.3	159.0	156.6	146.8	140.7
80°	104.0	112.5	111.3	104.0	100.3
82.5°	68.5	73.4	70.9	66.0	63.6
85°	36.7	37.9	37.9	35.5	34.2
87.5°	13.5	13.5	13.5	13.5	12.2
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	20.02	21.62	20.39	21.93	22.25	19.81	21.40	20.17	21.72	22.03
	3H	21.52	22.96	21.90	23.29	23.65	21.28	22.72	21.65	23.04	23.40
	4H	22.03	23.38	22.43	23.73	24.10	21.77	23.13	22.17	23.47	23.85
	6H	22.35	23.60	22.76	23.97	24.36	22.09	23.34	22.50	23.71	24.10
	8H	22.43	23.62	22.86	24.01	24.41	22.16	23.36	22.59	23.75	24.15
	12H	22.47	23.61	22.90	24.00	24.42	22.20	23.34	22.63	23.72	24.15
4H	2H	20.64	22.00	21.04	22.34	22.72	20.47	21.83	20.87	22.17	22.55
	3H	22.37	23.50	22.78	23.90	24.30	22.14	23.27	22.55	23.67	24.07
	4H	23.00	24.02	23.43	24.43	24.87	22.74	23.75	23.17	24.17	24.61
	6H	23.43	24.31	23.88	24.76	25.21	23.15	24.04	23.61	24.48	24.93
	8H	23.54	24.37	24.00	24.81	25.28	23.25	24.08	23.72	24.53	24.99
	12H	23.61	24.35	24.09	24.82	25.29	23.31	24.05	23.79	24.53	25.00
8H	4H	23.24	24.07	23.70	24.51	24.98	23.01	23.84	23.47	24.28	24.75
	6H	23.77	24.45	24.26	24.94	25.42	23.51	24.20	24.01	24.69	25.16
	8H	23.93	24.55	24.44	25.05	25.54	23.66	24.27	24.17	24.78	25.27
	12H	24.04	24.58	24.55	25.08	25.64	23.76	24.30	24.27	24.79	25.36
12H	4H	23.25	24.00	23.73	24.47	24.94	23.03	23.77	23.51	24.25	24.72
	6H	23.79	24.40	24.30	24.91	25.40	23.54	24.16	24.05	24.67	25.15
	8H	24.00	24.54	24.51	25.03	25.59	23.73	24.28	24.24	24.77	25.33