

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: P1439901

Luminaire Tested: S124DR-H1005D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439901
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-H1005D935-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

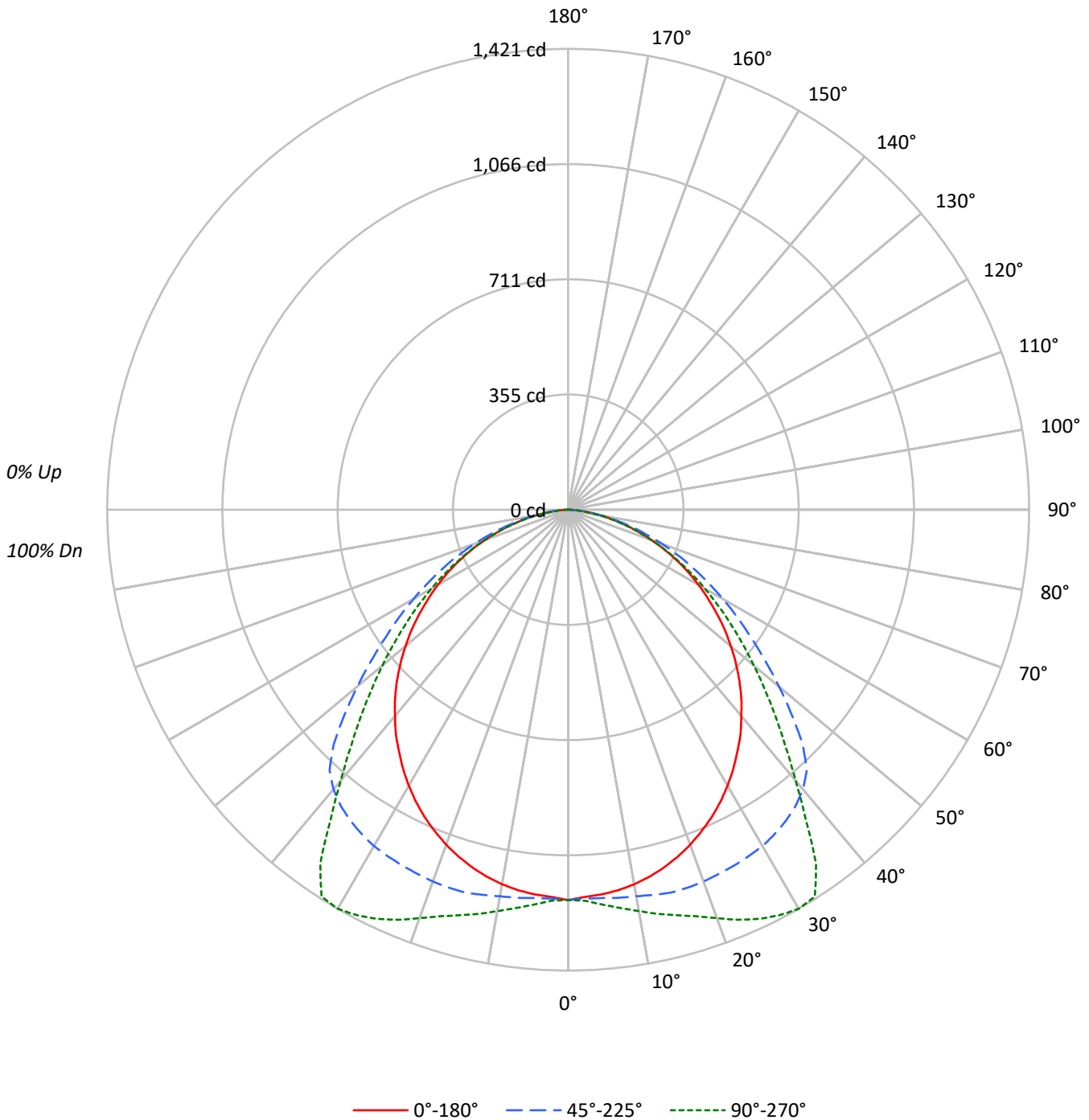
Lumens per Lamp: N/A
Luminaire Lumens: 3657.1 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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: P1439901

CATALOG NUMBER: S124DR-H1005D935-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°	10640	10640	10640
5°	10565	10670	10848
10°	10528	10867	11281
15°	10453	11188	11847
20°	10344	11478	12611
25°	10207	11808	13582
30°	10030	12225	14504
35°	9814	12631	14378
40°	9582	12989	12580
45°	9331	12772	11311
50°	8998	11663	10282
55°	8629	10613	9394
60°	8207	9731	8603
65°	7707	8870	7856
70°	7052	7936	7021
75°	6214	6818	6091
80°	5112	5473	4929
85°	3591	3713	3358

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	3.2
10°-20°	346.0	9.5
20°-30°	563.2	15.4
30°-40°	715.3	19.6
40°-50°	697.0	19.1
50°-60°	571.4	15.6
60°-70°	398.7	10.9
70°-80°	204.6	5.6
80°-90°	45.4	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°	1024.7	28.0
0°-40°	1740.0	47.6
0°-60°	3008.4	82.3
0°-90°	3657.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3657.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1203	1203	1203	1203	1203	
5°	1190	1208	1202	1210	1222	113
15°	1142	1177	1222	1271	1294	322
25°	1046	1114	1210	1336	1392	482
35°	909	998	1170	1340	1332	569
45°	746	838	1022	936	905	575
55°	560	646	688	631	609	500
65°	368	422	424	390	376	365
75°	182	202	200	185	178	194
85°	35	37	37	34	33	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1203.4	1203.4	1203.4	1203.4	1203.4
2.5°	1195.1	1210.4	1199.8	1204.5	1206.9
5°	1190.4	1208.1	1202.2	1210.4	1222.3
7.5°	1183.3	1203.4	1206.9	1223.4	1238.8
10°	1172.7	1196.3	1210.4	1238.8	1256.5
12.5°	1158.5	1188.0	1216.4	1255.3	1276.6
15°	1142.0	1177.4	1222.3	1270.7	1294.3
17.5°	1121.9	1164.4	1222.3	1282.5	1314.4
20°	1099.4	1149.0	1219.9	1297.8	1340.3
22.5°	1073.5	1132.5	1215.2	1315.5	1368.7
25°	1046.3	1113.6	1210.4	1335.6	1392.3
27.5°	1015.6	1091.2	1204.5	1351.0	1410.0
30°	982.5	1064.0	1197.5	1358.1	1420.7
32.5°	947.1	1032.1	1185.6	1358.1	1414.7
35°	909.3	997.9	1170.3	1340.3	1332.1
37.5°	872.7	961.3	1151.4	1254.1	1202.2
40°	830.2	922.3	1125.4	1132.5	1090.0
42.5°	790.0	881.0	1088.8	1029.8	992.0
45°	746.3	838.5	1021.5	936.5	904.6
47.5°	701.5	792.4	934.1	852.6	823.1
50°	654.2	746.3	847.9	773.5	747.5
52.5°	608.2	696.7	765.2	700.3	675.5
55°	559.8	646.0	688.5	630.6	609.4
57.5°	511.3	594.0	618.8	565.7	545.6
60°	464.1	538.5	550.3	504.3	486.5
62.5°	416.9	480.6	485.4	445.2	429.9
65°	368.4	421.6	424.0	389.7	375.5
67.5°	321.2	364.9	364.9	335.4	323.6
70°	272.8	309.4	307.0	283.4	271.6
72.5°	226.7	252.7	250.4	232.6	224.4
75°	181.9	201.9	199.6	185.4	178.3
77.5°	139.3	153.5	151.2	141.7	135.8
80°	100.4	108.6	107.5	100.4	96.8
82.5°	66.1	70.9	68.5	63.8	61.4
85°	35.4	36.6	36.6	34.2	33.1
87.5°	13.0	13.0	13.0	13.0	11.8
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	19.90	21.50	20.26	21.81	22.13	19.68	21.28	20.05	21.60	21.91
	3H	21.40	22.84	21.78	23.17	23.53	21.16	22.60	21.53	22.92	23.28
	4H	21.91	23.26	22.30	23.61	23.98	21.65	23.00	22.05	23.35	23.73
	6H	22.23	23.48	22.64	23.84	24.23	21.97	23.22	22.38	23.58	23.98
	8H	22.31	23.50	22.73	23.89	24.29	22.04	23.24	22.47	23.63	24.03
	12H	22.35	23.49	22.78	23.87	24.30	22.08	23.22	22.51	23.60	24.03
4H	2H	20.52	21.87	20.92	22.22	22.60	20.35	21.71	20.75	22.05	22.43
	3H	22.25	23.38	22.66	23.78	24.18	22.02	23.15	22.43	23.55	23.95
	4H	22.88	23.90	23.31	24.31	24.75	22.62	23.63	23.05	24.05	24.48
	6H	23.31	24.19	23.76	24.63	25.09	23.03	23.91	23.48	24.36	24.81
	8H	23.42	24.25	23.88	24.69	25.16	23.13	23.96	23.59	24.40	24.87
	12H	23.48	24.23	23.96	24.70	25.17	23.19	23.93	23.67	24.41	24.88
8H	4H	23.12	23.95	23.58	24.39	24.86	22.89	23.72	23.35	24.16	24.63
	6H	23.64	24.33	24.14	24.82	25.30	23.39	24.08	23.88	24.56	25.04
	8H	23.81	24.42	24.32	24.93	25.42	23.54	24.15	24.05	24.66	25.15
	12H	23.92	24.46	24.43	24.95	25.52	23.64	24.18	24.14	24.67	25.23
12H	4H	23.13	23.87	23.61	24.35	24.82	22.91	23.65	23.39	24.13	24.60
	6H	23.67	24.28	24.18	24.79	25.28	23.42	24.04	23.93	24.54	25.03
	8H	23.88	24.42	24.38	24.91	25.47	23.61	24.16	24.12	24.65	25.21