

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: P1439900

Luminaire Tested: S124DR-H1005D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439900
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-H1005D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

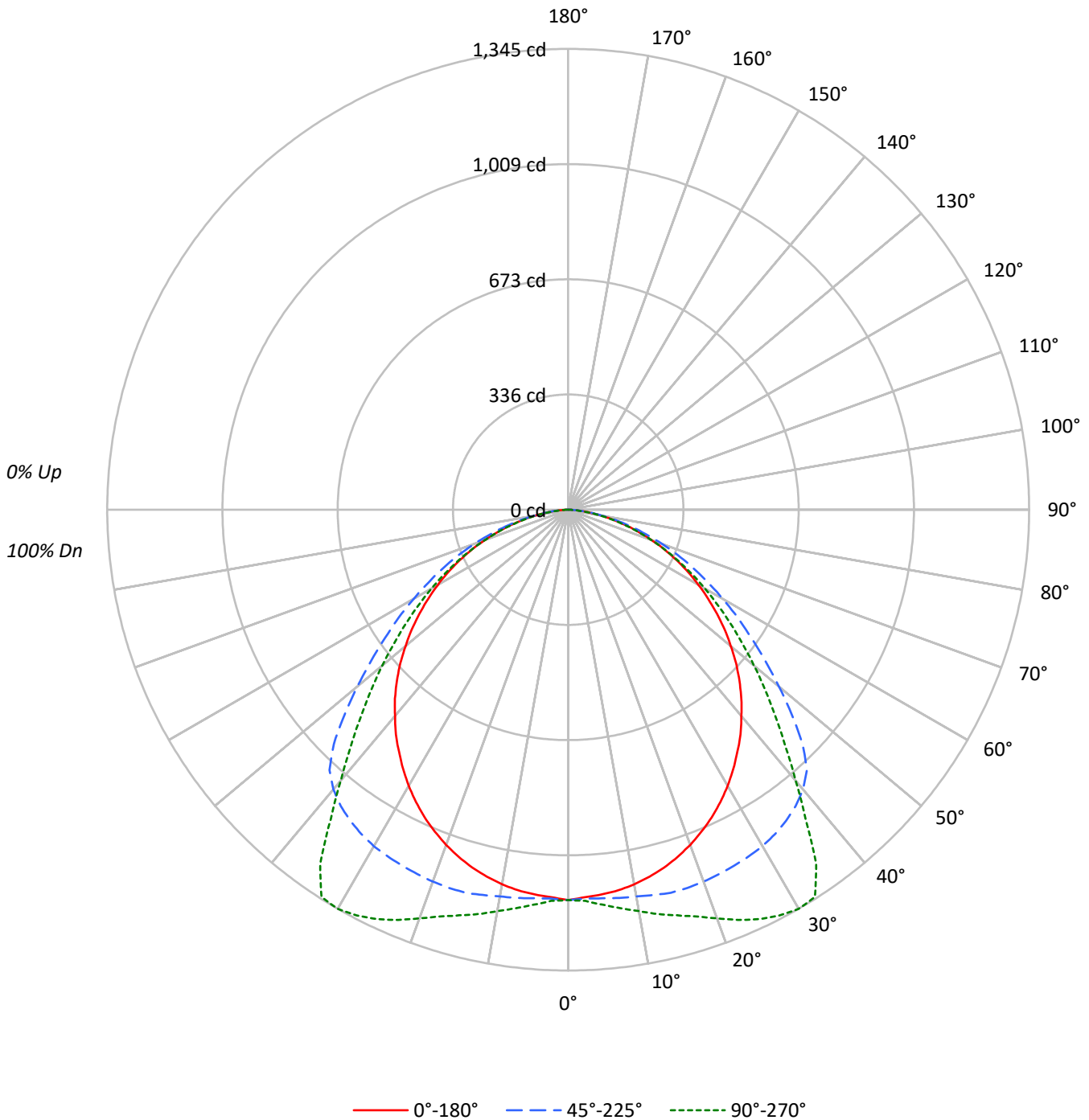
Lumens per Lamp: N/A
Luminaire Lumens: 3463.0 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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°	10075	10075	10075
5°	10004	10103	10272
10°	9969	10290	10682
15°	9897	10594	11218
20°	9795	10868	11942
25°	9666	11182	12861
30°	9499	11576	13733
35°	9293	11961	13615
40°	9073	12300	11912
45°	8836	12095	10711
50°	8521	11044	9736
55°	8170	10049	8894
60°	7772	9214	8146
65°	7299	8397	7439
70°	6677	7515	6649
75°	5882	6456	5770
80°	4842	5183	4669
85°	3398	3520	3175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12095 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.3	3.2
10°-20°	327.7	9.5
20°-30°	533.3	15.4
30°-40°	677.3	19.6
40°-50°	660.0	19.1
50°-60°	541.1	15.6
60°-70°	377.5	10.9
70°-80°	193.8	5.6
80°-90°	43.0	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°	970.4	28.0
0°-40°	1647.7	47.6
0°-60°	2848.7	82.3
0°-90°	3463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1127	1144	1138	1146	1157	107
15°	1081	1115	1157	1203	1226	305
25°	991	1054	1146	1265	1318	456
35°	861	945	1108	1269	1261	539
45°	707	794	967	887	857	545
55°	530	612	652	597	577	474
65°	349	399	401	369	356	345
75°	172	191	189	176	169	183
85°	34	35	35	32	31	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1139.5	1139.5	1139.5	1139.5	1139.5
2.5°	1131.7	1146.2	1136.1	1140.6	1142.8
5°	1127.2	1144.0	1138.4	1146.2	1157.4
7.5°	1120.5	1139.5	1142.8	1158.5	1173.0
10°	1110.4	1132.8	1146.2	1173.0	1189.8
12.5°	1097.0	1125.0	1151.8	1188.7	1208.8
15°	1081.3	1114.9	1157.4	1203.2	1225.6
17.5°	1062.3	1102.6	1157.4	1214.4	1244.6
20°	1041.1	1088.1	1155.1	1229.0	1269.2
22.5°	1016.5	1072.4	1150.7	1245.7	1296.0
25°	990.8	1054.5	1146.2	1264.7	1318.4
27.5°	961.7	1033.3	1140.6	1279.3	1335.2
30°	930.4	1007.5	1133.9	1286.0	1345.2
32.5°	896.8	977.3	1122.7	1286.0	1339.7
35°	861.0	944.9	1108.2	1269.2	1261.4
37.5°	826.4	910.3	1090.3	1187.6	1138.4
40°	786.1	873.3	1065.7	1072.4	1032.1
42.5°	748.1	834.2	1031.0	975.1	939.3
45°	706.7	794.0	967.3	886.8	856.6
47.5°	664.2	750.3	884.5	807.4	779.4
50°	619.5	706.7	802.9	732.4	707.8
52.5°	575.9	659.8	724.6	663.1	639.6
55°	530.0	611.7	651.9	597.1	577.0
57.5°	484.2	562.5	586.0	535.6	516.6
60°	439.5	509.9	521.1	477.5	460.7
62.5°	394.7	455.1	459.6	421.6	407.0
65°	348.9	399.2	401.4	369.0	355.6
67.5°	304.2	345.5	345.5	317.6	306.4
70°	258.3	293.0	290.7	268.4	257.2
72.5°	214.7	239.3	237.1	220.3	212.5
75°	172.2	191.2	189.0	175.6	168.9
77.5°	132.0	145.4	143.1	134.2	128.6
80°	95.1	102.9	101.8	95.1	91.7
82.5°	62.6	67.1	64.9	60.4	58.1
85°	33.5	34.7	34.7	32.4	31.3
87.5°	12.3	12.3	12.3	12.3	11.2
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	19.71	21.31	20.08	21.62	21.94	19.49	21.09	19.86	21.41	21.72
	3H	21.21	22.65	21.59	22.98	23.34	20.97	22.41	21.34	22.73	23.09
	4H	21.72	23.07	22.11	23.42	23.79	21.46	22.81	21.86	23.16	23.54
	6H	22.04	23.29	22.45	23.65	24.05	21.78	23.03	22.19	23.40	23.79
	8H	22.12	23.31	22.54	23.70	24.10	21.85	23.05	22.28	23.44	23.84
	12H	22.16	23.30	22.59	23.68	24.11	21.89	23.03	22.32	23.41	23.84
4H	2H	20.33	21.69	20.73	22.03	22.41	20.16	21.52	20.56	21.86	22.24
	3H	22.06	23.19	22.47	23.59	23.99	21.83	22.96	22.24	23.36	23.76
	4H	22.69	23.71	23.12	24.12	24.56	22.43	23.44	22.86	23.86	24.29
	6H	23.12	24.00	23.57	24.44	24.90	22.84	23.73	23.30	24.17	24.62
	8H	23.23	24.06	23.69	24.50	24.97	22.94	23.77	23.40	24.21	24.68
	12H	23.29	24.04	23.78	24.51	24.98	23.00	23.74	23.48	24.22	24.69
8H	4H	22.93	23.76	23.39	24.20	24.67	22.70	23.53	23.16	23.97	24.44
	6H	23.46	24.14	23.95	24.63	25.11	23.20	23.89	23.69	24.38	24.85
	8H	23.62	24.24	24.13	24.74	25.23	23.35	23.96	23.86	24.47	24.96
	12H	23.73	24.27	24.24	24.76	25.33	23.45	23.99	23.95	24.48	25.04
12H	4H	22.94	23.68	23.42	24.16	24.63	22.72	23.46	23.20	23.94	24.41
	6H	23.48	24.09	23.99	24.60	25.09	23.23	23.85	23.74	24.35	24.84
	8H	23.69	24.23	24.19	24.72	25.28	23.42	23.97	23.93	24.46	25.02