

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P998431

Luminaire Tested: S124DR-B1020DB2750-4F0-XX-W2A-D_5000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-B1020DB2750-4F0-XX-W2A-D_5000K
Description: Define 4 Direct Recessed with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

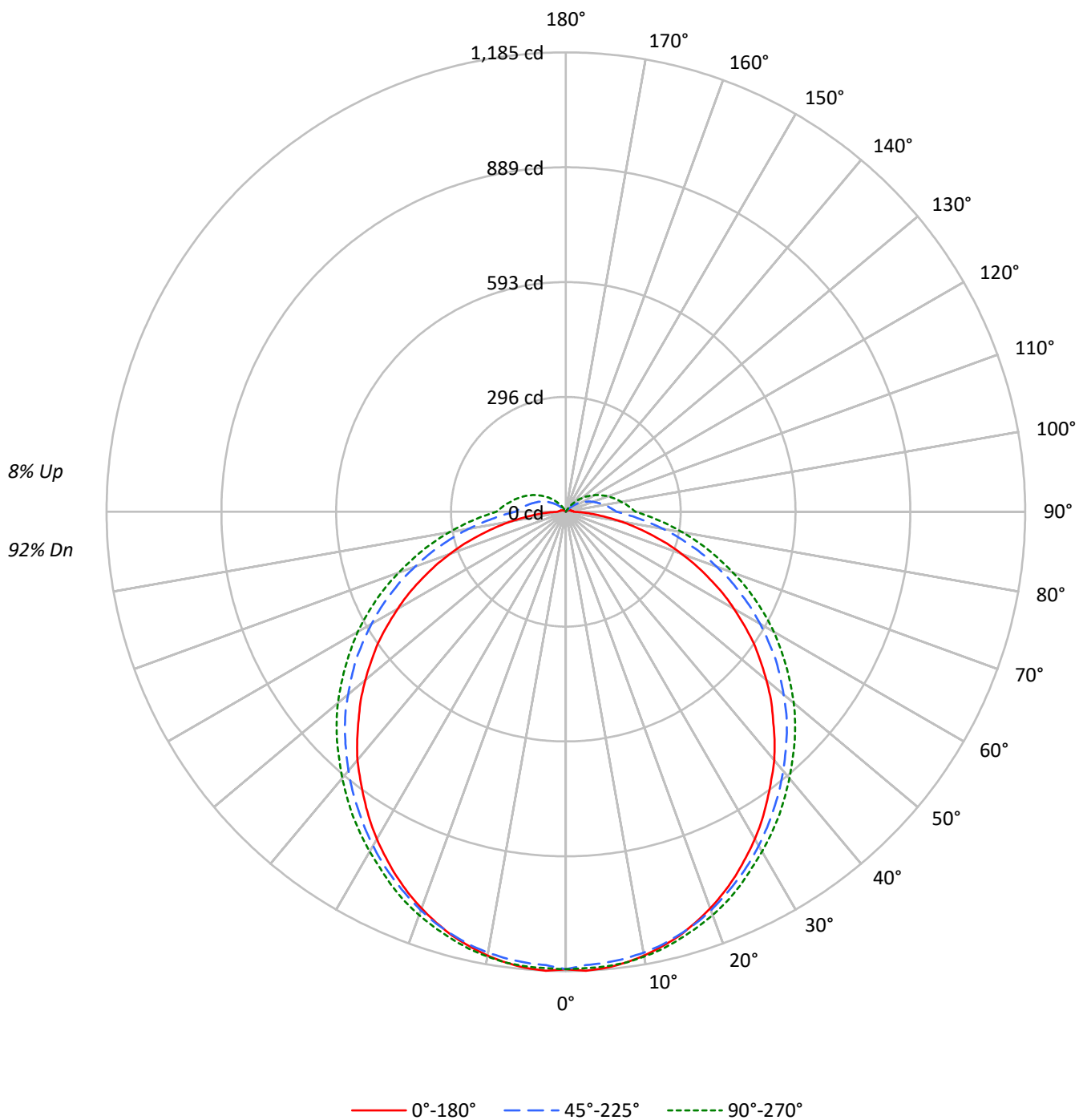
Lumens per Lamp: N/A
Luminaire Lumens: 4023.0 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V):
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	50	30	10
RCR																				
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	77	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	60
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9622	9622	9622
5°	9670	9562	9637
10°	9628	9563	9650
15°	9560	9538	9627
20°	9448	9494	9609
25°	9320	9428	9571
30°	9182	9369	9531
35°	9023	9313	9537
40°	8903	9283	9551
45°	8716	9295	9631
50°	8566	9304	9739
55°	8416	9375	9862
60°	8168	9440	10107
65°	7903	9586	10427
70°	7591	9861	10932
75°	7161	10451	11991
80°	6762	11975	14332
85°	6549	17309	22249

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 38530 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	2.8
10°-20°	320.3	8.0
20°-30°	484.4	12.0
30°-40°	586.0	14.6
40°-50°	619.5	15.4
50°-60°	583.0	14.5
60°-70°	483.8	12.0
70°-80°	339.5	8.4
80°-90°	191.4	4.8
90°-100°	114.0	2.8
100°-110°	84.4	2.1
110°-120°	56.6	1.4
120°-130°	31.9	0.8
130°-140°	13.8	0.3
140°-150°	2.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	916.5	22.8
0°-40°	1502.5	37.3
0°-60°	2705.0	67.2
0°-90°	3719.6	92.5
90°-120°	255.0	6.3
90°-150°	303.3	7.5
90°-180°	303.0	7.5
0°-180°	4023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1181	1177	1168	1179	1177	112
15°	1132	1134	1130	1142	1140	319
25°	1036	1044	1048	1062	1064	477
35°	906	922	936	954	958	568
45°	756	781	806	828	835	584
55°	592	620	659	686	694	528
65°	410	452	497	530	540	406
75°	227	276	332	369	381	241
85°	70	126	185	225	238	73
90°	21	74	131	169	180	14
95°	17	61	115	151	162	14
105°	12	38	87	120	131	13
115°	8	20	62	91	100	8
125°	5	4	37	62	70	5
135°	3	3	12	33	41	2
145°	1	0	0	8	13	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.0	1180.0	1180.0	1180.0	1180.0
2.5°	1185.3	1181.3	1170.7	1180.0	1178.6
5°	1181.3	1177.3	1168.1	1178.6	1177.3
7.5°	1173.4	1170.7	1162.8	1174.7	1173.4
10°	1162.8	1161.5	1154.9	1166.8	1165.4
12.5°	1148.3	1148.3	1144.3	1154.9	1154.9
15°	1132.4	1133.7	1129.8	1141.7	1140.3
17.5°	1111.3	1115.2	1113.9	1125.8	1124.5
20°	1088.8	1092.8	1094.1	1107.3	1107.3
22.5°	1063.7	1069.0	1071.6	1084.8	1087.5
25°	1035.9	1043.9	1047.8	1062.4	1063.7
27.5°	1005.6	1017.4	1022.7	1035.9	1037.3
30°	975.2	985.7	995.0	1009.5	1012.2
32.5°	942.1	955.3	965.9	983.1	985.7
35°	906.4	922.3	935.5	954.0	958.0
37.5°	870.8	889.3	905.1	923.6	927.6
40°	836.4	853.6	872.1	891.9	897.2
42.5°	796.8	816.6	839.1	861.5	865.5
45°	755.8	780.9	806.0	828.5	835.1
47.5°	717.5	742.6	771.7	794.1	802.1
50°	675.2	704.3	733.4	759.8	767.7
52.5°	632.9	662.0	696.4	722.8	730.7
55°	592.0	619.7	659.4	685.8	693.7
57.5°	545.7	580.1	618.4	650.1	656.7
60°	500.8	535.1	578.8	609.1	619.7
62.5°	457.2	495.5	539.1	569.5	580.1
65°	409.6	451.9	496.8	529.9	540.4
67.5°	364.7	409.6	457.2	490.2	500.8
70°	318.4	363.4	413.6	449.3	458.5
72.5°	273.5	319.8	373.9	408.3	418.9
75°	227.3	276.2	331.7	368.7	380.6
77.5°	183.7	235.2	293.3	330.3	343.6
80°	144.0	196.9	255.0	294.7	305.2
82.5°	104.4	159.9	218.0	259.0	270.9
85°	70.0	125.5	185.0	224.6	237.8
87.5°	43.6	97.8	155.9	194.2	206.1
90°	21.1	74.0	130.8	169.1	179.7
92.5°	19.8	66.1	122.9	159.9	170.5
95°	17.2	60.8	115.0	150.6	162.5
97.5°	15.9	54.2	108.4	142.7	154.6
100°	14.5	48.9	100.4	136.1	145.3
102.5°	14.5	43.6	93.8	128.2	138.7
105°	11.9	38.3	87.2	120.2	130.8
107.5°	11.9	34.4	80.6	113.6	122.9
110°	10.6	29.1	75.3	105.7	116.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.2	25.1	68.7	97.8	108.4
115°	7.9	19.8	62.1	91.2	100.4
117.5°	7.9	15.9	55.5	83.2	93.8
120°	6.6	10.6	48.9	75.3	85.9
122.5°	6.6	6.6	42.3	68.7	78.0
125°	5.3	4.0	37.0	62.1	70.0
127.5°	5.3	4.0	30.4	54.2	63.4
130°	4.0	2.6	23.8	47.6	55.5
132.5°	4.0	2.6	18.5	41.0	48.9
135°	2.6	2.6	11.9	33.0	41.0
137.5°	2.6	1.3	6.6	26.4	33.0
140°	2.6	1.3	2.6	19.8	26.4
142.5°	1.3	1.3	0.0	14.5	19.8
145°	1.3	0.0	0.0	7.9	13.2
147.5°	1.3	0.0	0.0	1.3	6.6
150°	1.3	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)