

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: P992329

Luminaire Tested: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K
Description: Define 3 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

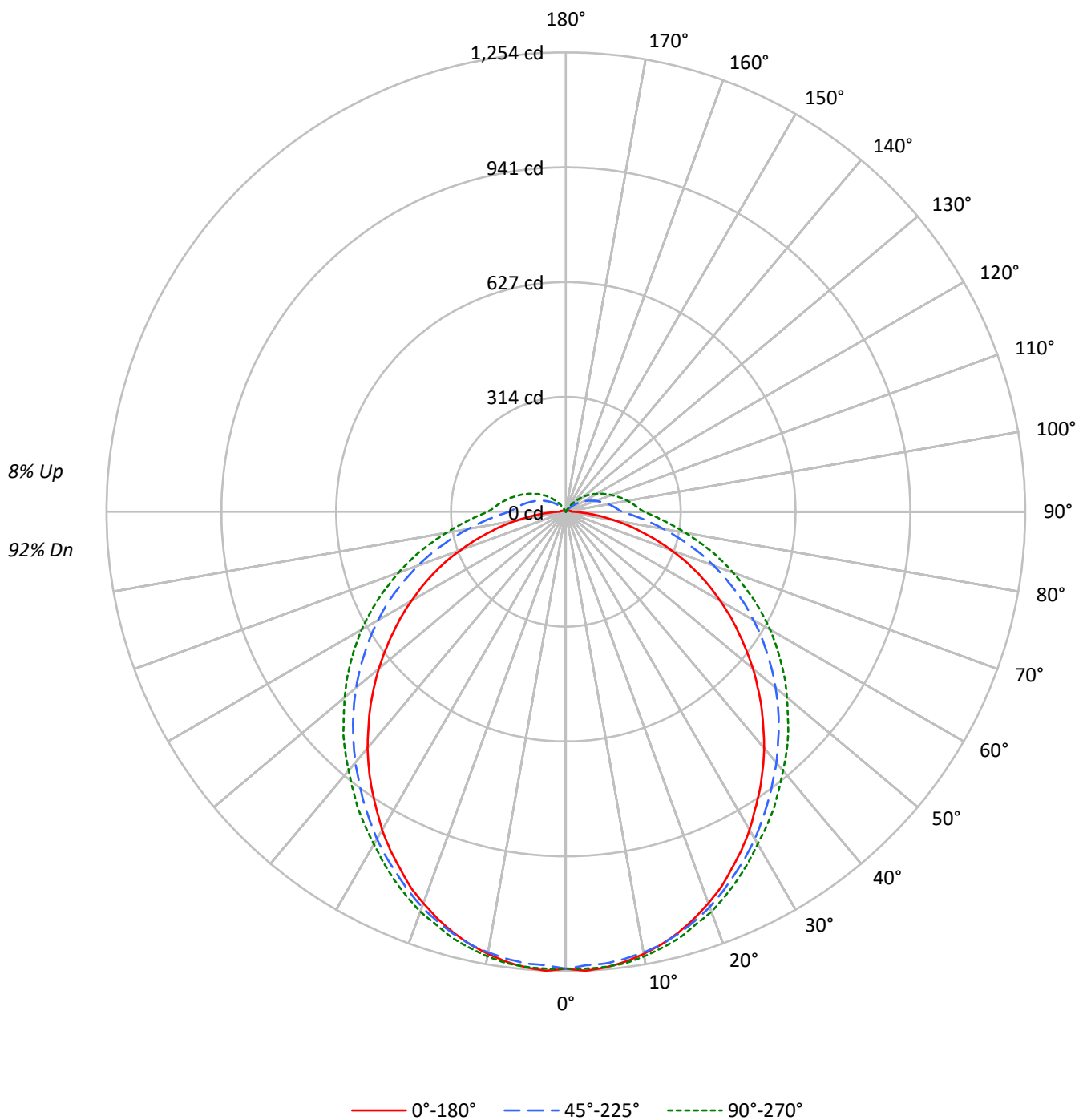
Lumens per Lamp: N/A
Luminaire Lumens: 4192.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P992329

CATALOG NUMBER: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K

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	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	92
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	76	76	73
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	63	63	60
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	52	52	50
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	45	45	42
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	39	39	36
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	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	37	30	25	36	29	25	34	28	24	24	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13426	13426	13426
5°	13492	13374	13477
10°	13396	13351	13470
15°	13249	13279	13415
20°	13027	13151	13307
25°	12748	12959	13168
30°	12464	12818	13021
35°	12140	12659	12998
40°	11837	12563	12964
45°	11501	12513	13072
50°	11171	12514	13197
55°	10811	12572	13463
60°	10471	12725	13864
65°	10139	13012	14395
70°	9621	13514	15308
75°	8983	14465	17010
80°	8337	16842	20549
85°	8225	25503	32889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 58682 cd/sqm

TEST NUMBER: P992329

CATALOG NUMBER: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	2.8
10°-20°	337.3	8.0
20°-30°	504.4	12.0
30°-40°	602.3	14.4
40°-50°	630.1	15.0
50°-60°	591.3	14.1
60°-70°	493.9	11.8
70°-80°	353.2	8.4
80°-90°	210.1	5.0
90°-100°	132.0	3.1
100°-110°	97.1	2.3
110°-120°	64.8	1.5
120°-130°	37.0	0.9
130°-140°	16.6	0.4
140°-150°	3.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	960.1	22.9
0°-40°	1562.3	37.3
0°-60°	2783.8	66.4
0°-90°	3841.0	91.6
90°-120°	293.9	7.0
90°-150°	351.0	8.4
90°-180°	351.0	8.4
0°-180°	4192.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1249	1246	1238	1249	1247	118
15°	1189	1193	1192	1205	1204	335
25°	1073	1087	1091	1109	1109	495
35°	924	946	963	984	989	578
45°	756	788	822	848	859	583
55°	576	621	670	706	717	516
65°	398	451	511	552	565	394
75°	216	280	348	393	409	231
85°	67	134	206	253	266	69
90°	18	84	154	200	213	13
95°	15	68	134	177	190	12
105°	11	44	102	140	152	11
115°	7	23	72	105	116	7
125°	4	4	44	72	82	4
135°	3	1	16	41	48	2
145°	1	0	0	11	16	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

TEST NUMBER: P992329

CATALOG NUMBER: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1247.3	1247.3	1247.3	1247.3	1247.3
2.5°	1254.1	1250.0	1239.2	1250.0	1248.7
5°	1248.7	1246.0	1237.8	1248.7	1247.3
7.5°	1239.2	1239.2	1231.0	1244.6	1243.3
10°	1225.6	1228.3	1221.5	1235.1	1232.4
12.5°	1209.3	1213.4	1209.3	1221.5	1218.8
15°	1188.9	1193.0	1191.6	1205.2	1203.8
17.5°	1164.4	1172.6	1171.2	1183.5	1180.7
20°	1137.3	1145.4	1148.1	1160.4	1161.7
22.5°	1108.7	1116.9	1121.0	1137.3	1135.9
25°	1073.4	1087.0	1091.1	1108.7	1108.7
27.5°	1039.4	1054.4	1062.5	1077.5	1078.8
30°	1002.8	1020.4	1031.3	1047.6	1047.6
32.5°	962.0	982.4	997.3	1015.0	1019.1
35°	923.9	945.7	963.4	983.7	989.2
37.5°	883.2	907.6	928.0	951.1	955.2
40°	842.4	866.9	894.1	917.2	922.6
42.5°	797.6	828.8	857.4	883.2	891.3
45°	755.5	788.1	822.0	847.9	858.7
47.5°	710.6	747.3	785.4	813.9	822.0
50°	667.1	705.2	747.3	778.6	788.1
52.5°	620.9	661.7	709.3	741.9	754.1
55°	576.1	620.9	669.9	706.5	717.4
57.5°	532.6	578.8	631.8	668.5	680.7
60°	486.4	535.3	591.1	629.1	644.0
62.5°	443.0	493.2	553.0	591.1	604.6
65°	398.1	451.1	510.9	551.7	565.2
67.5°	353.3	409.0	468.8	513.6	524.5
70°	305.7	364.1	429.4	472.8	486.4
72.5°	262.2	320.7	388.6	433.4	447.0
75°	216.0	279.9	347.8	392.7	409.0
77.5°	176.6	240.5	308.4	356.0	368.2
80°	134.5	201.1	271.7	317.9	331.5
82.5°	97.8	165.8	237.8	284.0	297.6
85°	66.6	134.5	206.5	252.7	266.3
87.5°	40.8	108.7	178.0	224.2	237.8
90°	17.7	84.2	153.5	199.7	213.3
92.5°	16.3	74.7	142.7	187.5	199.7
95°	14.9	67.9	134.5	176.6	190.2
97.5°	13.6	62.5	126.4	167.1	180.7
100°	12.2	55.7	118.2	157.6	171.2
102.5°	10.9	48.9	110.1	148.1	161.7
105°	10.9	43.5	101.9	140.0	152.2
107.5°	9.5	38.0	93.8	130.4	142.7
110°	8.2	32.6	87.0	122.3	133.2



TEST NUMBER: P992329

CATALOG NUMBER: S123DR-B1000DB2750-4F0-XX-W2A-D_3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.2	27.2	78.8	112.8	125.0
115°	6.8	23.1	72.0	104.6	115.5
117.5°	6.8	17.7	63.9	96.5	107.3
120°	5.4	12.2	57.1	88.3	97.8
122.5°	5.4	8.2	50.3	80.2	89.7
125°	4.1	4.1	43.5	72.0	81.5
127.5°	4.1	2.7	36.7	63.9	73.4
130°	4.1	2.7	29.9	55.7	63.9
132.5°	2.7	2.7	23.1	47.6	57.1
135°	2.7	1.4	16.3	40.8	47.6
137.5°	2.7	1.4	10.9	32.6	39.4
140°	1.4	1.4	5.4	25.8	32.6
142.5°	1.4	0.0	0.0	17.7	24.5
145°	1.4	0.0	0.0	10.9	16.3
147.5°	0.0	0.0	0.0	4.1	9.5
150°	0.0	0.0	0.0	0.0	2.7
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)