

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: P992357

Luminaire Tested: S123DR-B1165DB2750-4F0-XX-W2A-D_2700K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992357
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-B1165DB2750-4F0-XX-W2A-D_2700K
Description: Define 3 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

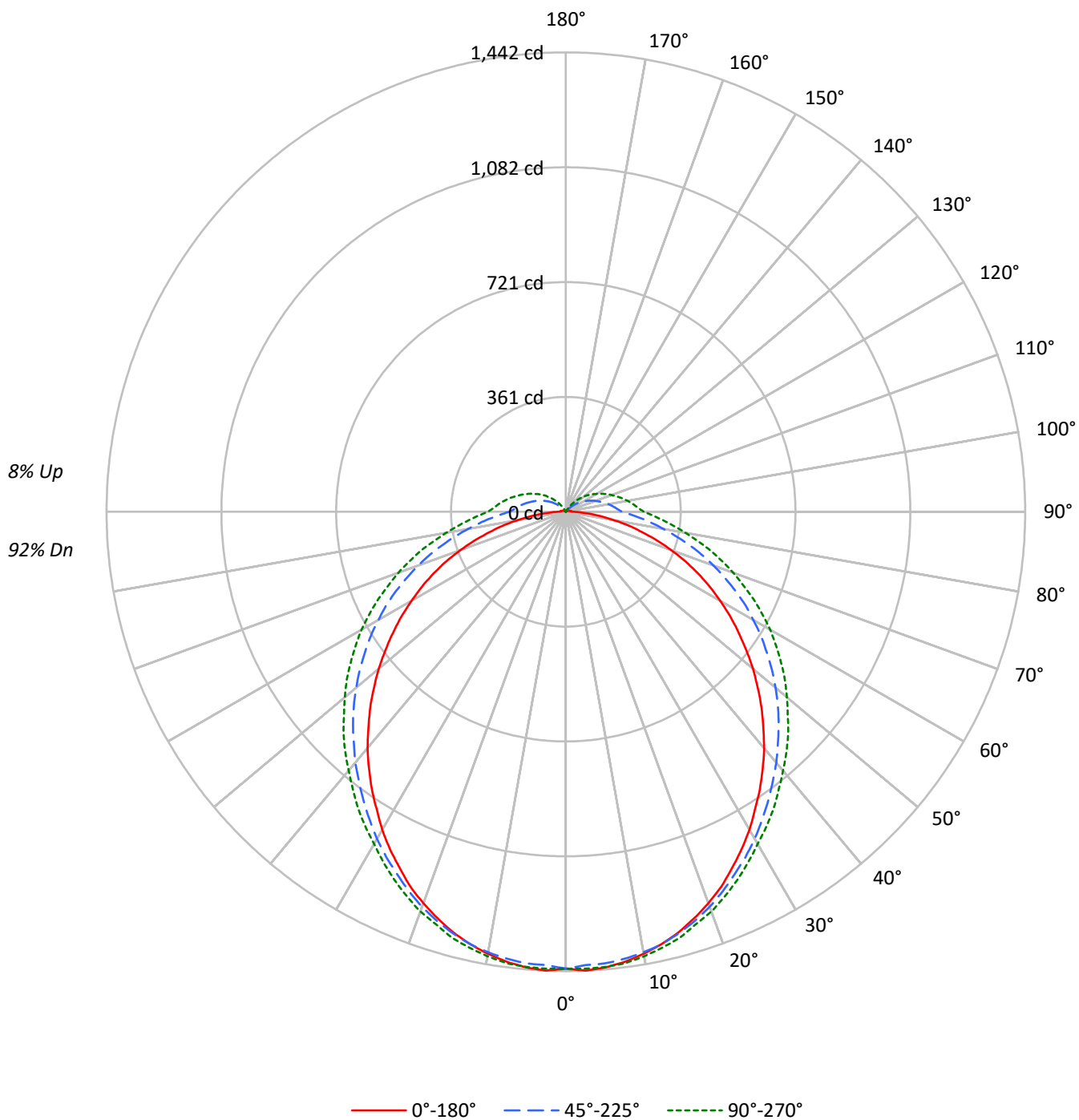
Lumens per Lamp: N/A
Luminaire Lumens: 4819.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
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
RW	70	50	30	10	70	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
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15434	15434	15434
5°	15511	15376	15493
10°	15399	15348	15484
15°	15230	15266	15422
20°	14976	15119	15298
25°	14656	14897	15138
30°	14327	14735	14968
35°	13956	14552	14942
40°	13607	14442	14903
45°	13221	14385	15028
50°	12842	14386	15170
55°	12429	14452	15477
60°	12038	14628	15939
65°	11657	14958	16550
70°	11059	15534	17599
75°	10331	16631	19555
80°	9583	19365	23623
85°	9448	29319	37804

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 67442 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.0	2.8
10°-20°	387.8	8.0
20°-30°	579.9	12.0
30°-40°	692.3	14.4
40°-50°	724.4	15.0
50°-60°	679.8	14.1
60°-70°	567.8	11.8
70°-80°	406.0	8.4
80°-90°	241.6	5.0
90°-100°	151.8	3.2
100°-110°	111.6	2.3
110°-120°	74.5	1.5
120°-130°	42.5	0.9
130°-140°	19.1	0.4
140°-150°	4.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1103.7	22.9
0°-40°	1796.0	37.3
0°-60°	3200.1	66.4
0°-90°	4415.5	91.6
90°-120°	337.9	7.0
90°-150°	403.5	8.4
90°-180°	403.0	8.4
0°-180°	4819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1436	1432	1423	1436	1434	136
15°	1367	1371	1370	1386	1384	385
25°	1234	1250	1254	1275	1275	569
35°	1062	1087	1107	1131	1137	664
45°	868	906	945	975	987	670
55°	662	714	770	812	825	593
65°	458	519	587	634	650	452
75°	248	322	400	451	470	265
85°	76	155	237	290	306	79
90°	20	97	176	230	245	15
95°	17	78	155	203	219	13
105°	12	50	117	161	175	13
115°	8	27	83	120	133	8
125°	5	5	50	83	94	5
135°	3	2	19	47	55	2
145°	2	0	0	12	19	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°	1433.9	1433.9	1433.9	1433.9	1433.9
2.5°	1441.7	1437.0	1424.5	1437.0	1435.5
5°	1435.5	1432.3	1423.0	1435.5	1433.9
7.5°	1424.5	1424.5	1415.1	1430.8	1429.2
10°	1408.9	1412.0	1404.2	1419.8	1416.7
12.5°	1390.2	1394.8	1390.2	1404.2	1401.1
15°	1366.7	1371.4	1369.9	1385.5	1383.9
17.5°	1338.6	1348.0	1346.4	1360.5	1357.4
20°	1307.4	1316.7	1319.9	1333.9	1335.5
22.5°	1274.6	1283.9	1288.6	1307.4	1305.8
25°	1234.0	1249.6	1254.3	1274.6	1274.6
27.5°	1194.9	1212.1	1221.5	1238.6	1240.2
30°	1152.7	1173.0	1185.5	1204.3	1204.3
32.5°	1105.9	1129.3	1146.5	1166.8	1171.5
35°	1062.1	1087.1	1107.4	1130.9	1137.1
37.5°	1015.3	1043.4	1066.8	1093.4	1098.1
40°	968.4	996.5	1027.8	1054.3	1060.6
42.5°	916.9	952.8	985.6	1015.3	1024.7
45°	868.5	905.9	945.0	974.7	987.2
47.5°	816.9	859.1	902.8	935.6	945.0
50°	766.9	810.7	859.1	895.0	905.9
52.5°	713.8	760.7	815.4	852.8	866.9
55°	662.3	713.8	770.1	812.2	824.7
57.5°	612.3	665.4	726.3	768.5	782.5
60°	559.2	615.4	679.5	723.2	740.4
62.5°	509.2	567.0	635.7	679.5	695.1
65°	457.7	518.6	587.3	634.2	649.8
67.5°	406.1	470.2	538.9	590.4	602.9
70°	351.4	418.6	493.6	543.6	559.2
72.5°	301.5	368.6	446.7	498.3	513.9
75°	248.4	321.8	399.9	451.4	470.2
77.5°	203.1	276.5	354.6	409.2	423.3
80°	154.6	231.2	312.4	365.5	381.1
82.5°	112.5	190.6	273.3	326.5	342.1
85°	76.5	154.6	237.4	290.5	306.1
87.5°	46.9	125.0	204.6	257.7	273.3
90°	20.3	96.8	176.5	229.6	245.2
92.5°	18.7	85.9	164.0	215.6	229.6
95°	17.2	78.1	154.6	203.1	218.7
97.5°	15.6	71.9	145.3	192.1	207.7
100°	14.1	64.0	135.9	181.2	196.8
102.5°	12.5	56.2	126.5	170.3	185.9
105°	12.5	50.0	117.1	160.9	174.9
107.5°	10.9	43.7	107.8	149.9	164.0
110°	9.4	37.5	100.0	140.6	153.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.4	31.2	90.6	129.6	143.7
115°	7.8	26.6	82.8	120.3	132.8
117.5°	7.8	20.3	73.4	110.9	123.4
120°	6.2	14.1	65.6	101.5	112.5
122.5°	6.2	9.4	57.8	92.2	103.1
125°	4.7	4.7	50.0	82.8	93.7
127.5°	4.7	3.1	42.2	73.4	84.3
130°	4.7	3.1	34.4	64.0	73.4
132.5°	3.1	3.1	26.6	54.7	65.6
135°	3.1	1.6	18.7	46.9	54.7
137.5°	3.1	1.6	12.5	37.5	45.3
140°	1.6	1.6	6.2	29.7	37.5
142.5°	1.6	0.0	0.0	20.3	28.1
145°	1.6	0.0	0.0	12.5	18.7
147.5°	0.0	0.0	0.0	4.7	10.9
150°	0.0	0.0	0.0	0.0	3.1
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)