Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P1031600

Luminaire Tested: S123DIW-B340D1320UB40-4F0-XX-W2A-D1

Issue Date: 5/6/2025

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Test Information

Test Method:	LM-79-2019
Report Number:	P1031600
	REPORT IS A COMBINATION OF REPORTS P991297 AND P1007351
Test Lab:	INNOVATION CENTER
Issue Date:	5/6/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	NEO-RAY
Catalog Number:	S123DIW-B340D1320UB40-4F0-XX-W2A-D1
Description:	Define 3 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5945.0 lumens
Efficiency:	N/A
Efficacy:	107.9 lumens/watt
Spacing Criteria (0/90/45):	1.2 / 1.25 / 1.37
Luminous Opening:	Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')
CIE Type:	Semi-Indirect

Input Watts (W):	55.1
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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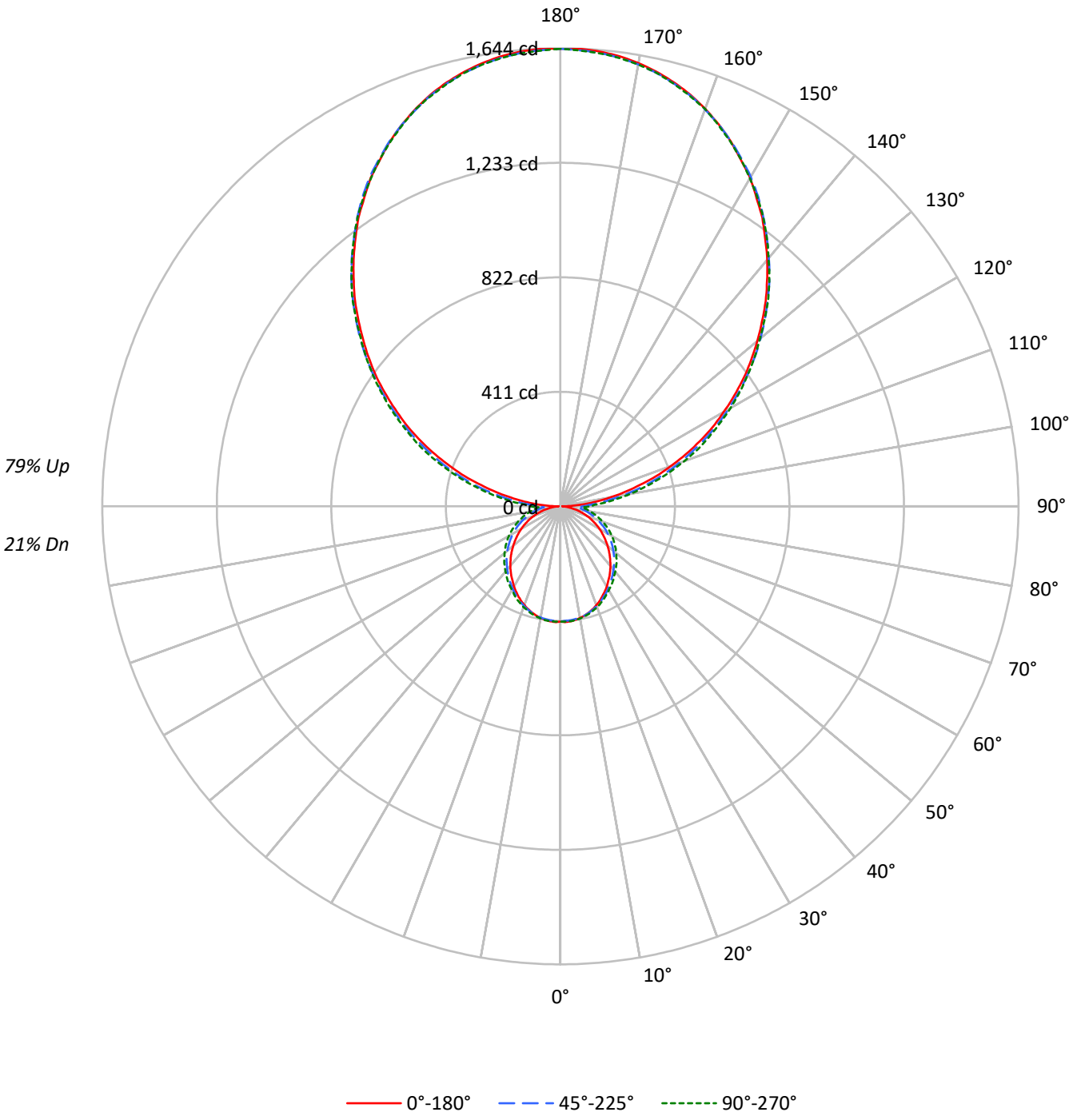
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	79	80	77	74	71	58	56	54	41	40	39	26	25	24	17
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	52	44	38	55	46	39	34	35	30	27	25	22	19	16	14	12	8
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7
7	53	41	34	28	47	37	30	26	28	24	20	20	17	15	13	11	10	7
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	37	28	22	17	21	17	14	16	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4455	4455	4455
5°	4467	4324	4321
10°	4426	4207	4175
15°	4367	4078	4021
20°	4284	3934	3855
25°	4182	3771	3683
30°	4076	3624	3510
35°	3960	3471	3369
40°	3847	3329	3220
45°	3723	3193	3098
50°	3600	3058	2965
55°	3464	2919	2844
60°	3330	2776	2718
65°	3193	2625	2572
70°	2986	2456	2420
75°	2727	2262	2264
80°	2421	2068	2086
85°	2123	1908	1959

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3723 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.3	0.7
10°-20°	111.9	1.9
20°-30°	167.4	2.8
30°-40°	199.8	3.4
40°-50°	209.1	3.5
50°-60°	196.2	3.3
60°-70°	163.9	2.8
70°-80°	117.2	2.0
80°-90°	73.2	1.2
90°-100°	149.5	2.5
100°-110°	352.2	5.9
110°-120°	566.3	9.5
120°-130°	728.9	12.3
130°-140°	811.0	13.6
140°-150°	793.1	13.3
150°-160°	666.7	11.2
160°-170°	443.9	7.5
170°-180°	155.4	2.6
0°-30°	318.6	5.4
0°-40°	518.4	8.7
0°-60°	923.7	15.5
0°-90°	1278.0	21.5
90°-120°	1068.0	18.0
90°-150°	3401.0	57.2
90°-180°	4667.0	78.5
0°-180°	5945.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	414	414	414	414	414	
5°	414	413	411	414	414	39
15°	394	396	395	400	400	111
25°	356	361	362	368	368	164
35°	307	314	320	326	328	192
45°	251	262	273	281	285	193
55°	191	206	222	234	238	171
65°	132	150	170	183	188	131
75°	72	93	115	130	136	77
85°	22	45	68	84	88	23
90°	7	42	82	102	110	10
95°	81	108	140	159	164	88
105°	294	307	338	351	358	314
115°	551	560	574	586	588	545
125°	804	808	818	822	820	717
135°	1042	1049	1053	1056	1056	803
145°	1264	1266	1270	1272	1268	789
155°	1446	1446	1448	1453	1444	666
165°	1575	1571	1571	1579	1570	444
175°	1638	1633	1633	1641	1632	156
180°	1642	1642	1642	1642	1642	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	413.9	413.9	413.9	*413.9*	413.9
2.5°	416.1	414.8	411.2	*414.8*	414.3
5°	414.3	413.4	410.7	*414.3*	413.9
7.5°	411.2	411.2	408.5	*413.0*	412.5
10°	406.7	407.6	405.3	*409.8*	408.9
12.5°	401.3	402.6	401.3	*405.3*	404.4
15°	394.5	395.9	395.4	*399.9*	399.5
17.5°	386.4	389.1	388.6	*392.7*	391.8
20°	377.4	380.1	381.0	*385.0*	385.5
22.5°	367.9	370.6	372.0	*377.4*	376.9
25°	356.2	360.7	362.0	*367.9*	367.9
27.5°	344.9	349.9	352.6	*357.5*	358.0
30°	332.7	338.6	342.2	*347.6*	347.6
32.5°	319.2	326.0	330.9	*336.8*	338.1
35°	306.6	313.8	319.7	*326.4*	328.2
37.5°	293.1	301.2	307.9	*315.6*	317.0
40°	279.5	287.7	296.7	*304.3*	306.1
42.5°	264.7	275.0	284.5	*293.1*	295.8
45°	250.7	261.5	272.8	*281.3*	284.9
47.5°	235.8	248.0	260.6	*270.1*	272.8
50°	221.4	234.0	248.0	*258.3*	261.5
52.5°	206.0	219.6	235.4	*246.2*	250.2
55°	191.2	206.0	222.3	*234.4*	238.1
57.5°	176.7	192.1	209.7	*221.8*	225.9
60°	161.4	177.6	196.1	*208.7*	213.7
62.5°	147.0	163.7	183.5	*196.1*	200.6
65°	132.1	149.7	169.5	*183.1*	187.6
67.5°	117.2	135.7	155.5	*170.4*	174.0
70°	101.4	120.8	142.5	*156.9*	161.4
72.5°	87.0	106.4	128.9	*143.8*	148.3
75°	71.7	92.9	115.4	*130.3*	135.7
77.5°	58.6	79.8	102.3	*118.1*	122.2
80°	44.6	66.7	90.2	*105.5*	110.0
82.5°	32.5	55.0	78.9	*94.2*	98.7
85°	22.1	44.6	68.5	*83.9*	88.4
87.5°	13.5	36.1	59.1	*74.4*	78.9
90°	7.2	42.2	81.9	*102.4*	109.5
92.5°	44.1	71.2	101.5	*120.3*	121.8
95°	81.1	107.6	140.1	*159.2*	163.7
97.5°	129.6	152.3	181.2	*201.3*	204.5
100°	179.6	201.7	228.8	*245.8*	252.9
102.5°	237.1	253.6	282.9	*299.4*	302.7
105°	293.9	307.3	338.3	*350.9*	357.5
107.5°	360.6	371.2	394.9	*411.0*	413.7
110°	422.0	432.7	453.3	*470.2*	471.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	486.5	494.1	511.3	*528.9*	533.0
115°	550.6	559.9	573.5	*585.6*	587.9
117.5°	616.4	621.3	634.0	*644.8*	644.5
120°	676.5	686.6	694.9	*704.0*	704.6
122.5°	739.7	745.8	757.2	*763.3*	762.6
125°	803.8	807.7	818.1	*822.5*	820.5
127.5°	863.2	870.4	879.2	*880.4*	878.4
130°	922.5	932.4	937.5	*940.9*	934.6
132.5°	981.4	991.7	995.9	*997.6*	994.2
135°	1042.0	1049.4	1053.0	*1055.9*	1055.6
137.5°	1097.5	1103.5	1110.5	*1111.3*	1109.7
140°	1155.1	1161.6	1164.2	*1169.7*	1162.9
142.5°	1208.0	1214.0	1216.6	*1221.2*	1216.9
145°	1263.5	1265.6	1269.5	*1271.8*	1268.4
147.5°	1310.7	1315.9	1319.8	*1321.2*	1315.2
150°	1361.1	1363.6	1366.2	*1366.2*	1359.4
152.5°	1402.3	1406.2	1407.5	*1410.1*	1403.6
155°	1446.2	1446.2	1447.5	*1452.7*	1443.6
157.5°	1483.6	1482.3	1483.6	*1488.8*	1481.0
160°	1518.5	1515.9	1515.9	*1522.3*	1517.2
162.5°	1549.4	1545.5	1546.8	*1553.3*	1544.3
165°	1575.2	1571.3	1571.3	*1579.1*	1570.1
167.5°	1597.2	1592.0	1593.3	*1601.0*	1593.3
170°	1615.2	1610.1	1610.1	*1619.1*	1610.1
172.5°	1629.4	1624.2	1624.2	*1632.0*	1623.0
175°	1638.4	1633.3	1633.3	*1641.0*	1632.0
177.5°	*1643.6*	*1638.4*	*1638.4*	*1646.2*	*1637.1*
180°	1642.3	1642.3	1642.3	*1642.3*	1642.3

(END OF REPORT)