

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: P998121

Luminaire Tested: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998121
REPORT IS A COMBINATION OF REPORTS P983858 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1
Description: Define 2 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

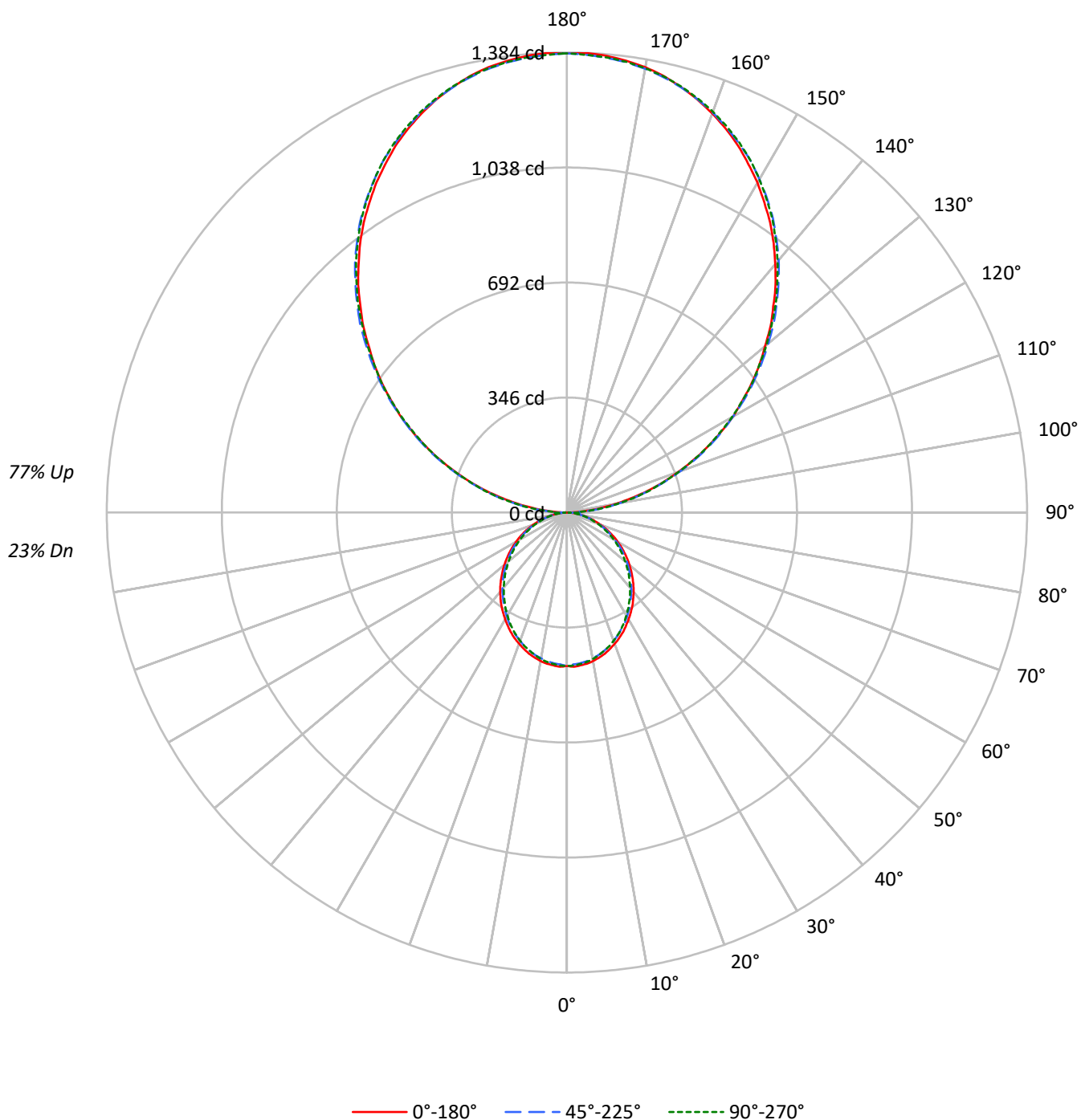
Lumens per Lamp: N/A
Luminaire Lumens: 5041.0 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 48
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: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

Luminous Intensity Polar Plot



TEST NUMBER: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

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	101	101	101	101	90	90	90	90	69	69	69	49	49	49	32	32	32
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27
2	84	76	71	66	74	68	63	59	52	49	46	38	36	34	25	23	22
3	76	67	60	55	67	60	54	49	46	42	39	34	31	29	22	20	19
4	70	59	52	46	62	53	47	42	41	36	33	30	27	25	19	18	16
5	64	53	45	39	56	47	40	35	36	32	28	27	24	21	17	16	14
6	59	47	39	34	52	42	35	31	33	28	24	24	21	18	16	14	12
7	54	42	35	29	48	38	31	27	30	25	21	22	19	16	14	13	11
8	50	38	31	26	44	34	28	23	27	22	19	20	17	14	13	11	10
9	46	35	28	23	41	31	25	21	24	20	17	18	15	13	12	10	9
10	43	32	25	20	38	29	22	18	22	18	15	17	14	11	11	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7310	7310	7310
5°	7322	6969	6918
10°	7262	6651	6518
15°	7156	6331	6099
20°	7013	5983	5700
25°	6870	5619	5302
30°	6688	5277	4883
35°	6520	4917	4473
40°	6309	4562	4085
45°	6100	4210	3706
50°	5873	3850	3311
55°	5633	3467	2937
60°	5362	3050	2548
65°	5066	2628	2140
70°	4694	2167	1728
75°	4173	1670	1334
80°	3545	1136	860
85°	2571	528	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6100 cd/sqm

TEST NUMBER: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.9
10°-20°	122.3	2.4
20°-30°	179.7	3.6
30°-40°	208.7	4.1
40°-50°	208.5	4.1
50°-60°	181.8	3.6
60°-70°	134.4	2.7
70°-80°	76.0	1.5
80°-90°	24.0	0.5
90°-100°	85.5	1.7
100°-110°	271.7	5.4
110°-120°	464.8	9.2
120°-130°	611.3	12.1
130°-140°	686.2	13.6
140°-150°	672.9	13.3
150°-160°	564.5	11.2
160°-170°	374.4	7.4
170°-180°	130.8	2.6
0°-30°	345.5	6.9
0°-40°	554.2	11.0
0°-60°	944.5	18.7
0°-90°	1178.9	23.4
90°-120°	822.0	16.3
90°-150°	2792.4	55.4
90°-180°	3862.0	76.6
0°-180°	5041.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	462	460	455	459	458	44
15°	440	437	431	433	431	124
25°	398	394	387	388	387	183
35°	343	339	332	329	327	214
45°	279	276	270	265	263	216
55°	211	209	203	198	196	189
65°	142	140	135	131	129	141
75°	75	74	72	69	70	80
85°	18	18	17	16	16	20
90°	1	15	41	38	40	5
95°	61	72	75	75	72	68
105°	251	254	256	259	259	265
115°	466	473	471	470	466	461
125°	678	689	685	682	681	606
135°	878	891	893	892	888	678
145°	1066	1074	1081	1082	1077	666
155°	1218	1222	1225	1231	1228	561
165°	1325	1324	1324	1332	1327	374
175°	1379	1376	1373	1381	1374	131
180°	1381	1381	1381	1381	1381	

TEST NUMBER: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	461.8	461.8	461.8	461.8	461.8
2.5°	464.5	462.3	457.4	461.8	461.0
5°	461.8	460.1	455.2	458.7	457.8
7.5°	458.7	456.1	451.2	454.7	453.8
10°	453.8	450.7	445.4	449.0	447.6
12.5°	447.2	444.5	439.2	441.4	440.5
15°	439.6	437.0	431.2	433.0	430.8
17.5°	430.3	427.6	421.9	424.1	421.9
20°	420.1	417.4	411.2	412.5	410.8
22.5°	409.9	405.9	400.1	400.1	399.2
25°	397.9	394.3	386.8	387.7	386.8
27.5°	384.6	381.5	375.7	374.4	372.1
30°	371.2	367.7	361.0	359.7	357.9
32.5°	357.0	354.4	347.3	344.6	342.8
35°	343.3	338.8	331.7	329.1	326.8
37.5°	327.7	323.7	316.6	313.5	311.3
40°	311.7	308.2	301.1	297.1	295.3
42.5°	296.2	292.6	285.5	281.1	278.4
45°	279.3	276.2	269.6	264.7	262.9
47.5°	262.9	259.8	252.7	247.8	245.1
50°	245.6	243.4	237.1	230.9	228.7
52.5°	228.7	225.6	219.8	214.9	211.8
55°	211.4	208.7	203.4	198.1	195.8
57.5°	194.1	191.8	186.1	180.7	179.0
60°	176.7	175.0	168.7	163.9	162.5
62.5°	159.9	156.8	152.3	147.9	146.1
65°	142.5	139.9	135.4	131.4	129.2
67.5°	124.8	122.6	118.6	115.5	113.7
70°	108.4	106.6	102.6	99.5	97.7
72.5°	91.5	89.7	87.5	84.4	83.0
75°	74.6	73.7	71.5	68.8	69.7
77.5°	59.5	57.7	56.8	55.5	54.2
80°	44.4	44.0	43.1	41.7	40.9
82.5°	30.2	30.2	29.8	28.0	28.0
85°	18.2	17.8	17.3	16.0	15.5
87.5°	8.0	7.1	6.2	4.9	4.4
90°	1.2	15.2	40.8	38.5	39.6
92.5°	25.6	35.0	36.1	37.3	37.3
95°	60.6	72.3	74.6	74.6	72.3
97.5°	101.4	111.9	116.6	116.6	116.6
100°	148.0	157.4	160.9	160.9	159.7
102.5°	197.0	204.0	208.7	209.8	208.7
105°	250.6	254.1	256.5	258.8	258.8
107.5°	304.3	308.9	308.9	310.1	304.3
110°	355.5	362.5	362.5	362.5	359.0

TEST NUMBER: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	411.5	418.5	417.3	413.8	411.5
115°	466.3	473.3	471.0	469.8	466.3
117.5°	521.1	530.4	524.6	521.1	517.6
120°	575.9	585.2	575.9	575.9	572.4
122.5°	626.0	637.6	631.8	628.3	626.0
125°	678.4	688.9	685.4	681.9	680.8
127.5°	729.7	742.6	737.9	733.2	729.7
130°	777.5	792.7	790.4	788.0	783.4
132.5°	831.2	842.8	844.0	838.2	834.7
135°	877.8	890.6	892.9	891.8	888.3
137.5°	929.1	939.6	941.9	940.7	936.1
140°	974.5	985.0	990.9	990.9	986.2
142.5°	1021.2	1031.7	1035.2	1036.3	1031.7
145°	1065.5	1073.6	1080.6	1081.8	1077.1
147.5°	1105.1	1115.6	1120.3	1122.6	1117.9
150°	1145.9	1152.9	1157.6	1161.1	1157.6
152.5°	1182.0	1189.0	1194.9	1199.5	1194.9
155°	1218.2	1221.7	1225.2	1231.0	1227.5
157.5°	1249.7	1252.0	1254.3	1262.5	1256.6
160°	1277.6	1280.0	1281.1	1288.1	1283.5
162.5°	1303.3	1303.3	1304.4	1312.6	1306.8
165°	1325.4	1324.3	1324.3	1332.4	1326.6
167.5°	1345.2	1341.7	1341.7	1349.9	1344.1
170°	1360.4	1356.9	1355.7	1363.9	1356.9
172.5°	1370.9	1367.4	1366.2	1374.4	1367.4
175°	1379.0	1375.5	1373.2	1381.4	1374.4
177.5°	1383.7	1380.2	1377.9	1384.9	1377.9
180°	1381.4	1381.4	1381.4	1381.4	1381.4

TEST NUMBER: P998121

CATALOG NUMBER: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-F1

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	8.93	9.59	10.08	10.74	12.34	9.71	10.37	10.87	11.52	13.12
	3H	10.25	10.85	11.42	12.00	13.62	11.32	11.92	12.49	13.07	14.69
	4H	10.65	11.21	11.82	12.36	13.99	11.90	12.47	13.08	13.62	15.25
	6H	10.86	11.38	12.04	12.53	14.17	12.30	12.82	13.48	13.97	15.61
	8H	10.88	11.37	12.06	12.54	14.17	12.40	12.90	13.58	14.06	15.69
	12H	10.86	11.33	12.05	12.50	14.15	12.44	12.91	13.62	14.07	15.72
4H	2H	9.37	9.94	10.55	11.09	12.72	10.02	10.58	11.20	11.73	13.36
	3H	10.87	11.34	12.06	12.52	14.16	11.78	12.25	12.96	13.43	15.06
	4H	11.37	11.80	12.56	12.97	14.63	12.45	12.89	13.64	14.05	15.71
	6H	11.66	12.03	12.85	13.22	14.87	12.94	13.31	14.13	14.50	16.14
	8H	11.71	12.06	12.90	13.24	14.90	13.07	13.42	14.26	14.60	16.26
	12H	11.70	12.02	12.91	13.21	14.88	13.13	13.44	14.33	14.63	16.30
8H	4H	11.53	11.88	12.72	13.05	14.72	12.52	12.87	13.71	14.05	15.71
	6H	11.90	12.19	13.11	13.41	15.07	13.08	13.37	14.29	14.59	16.25
	8H	12.01	12.25	13.22	13.45	15.13	13.27	13.52	14.48	14.72	16.40
	12H	12.03	12.25	13.24	13.44	15.15	13.36	13.58	14.57	14.77	16.48
12H	4H	11.50	11.82	12.71	13.01	14.67	12.48	12.79	13.68	13.98	15.65
	6H	11.92	12.17	13.13	13.37	15.05	13.07	13.32	14.28	14.52	16.20
	8H	12.02	12.24	13.24	13.44	15.15	13.26	13.48	14.48	14.67	16.38