

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: P998118

Luminaire Tested: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-D1

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998118
REPORT IS A COMBINATION OF REPORTS P983855 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-D1
Description: Define 2 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

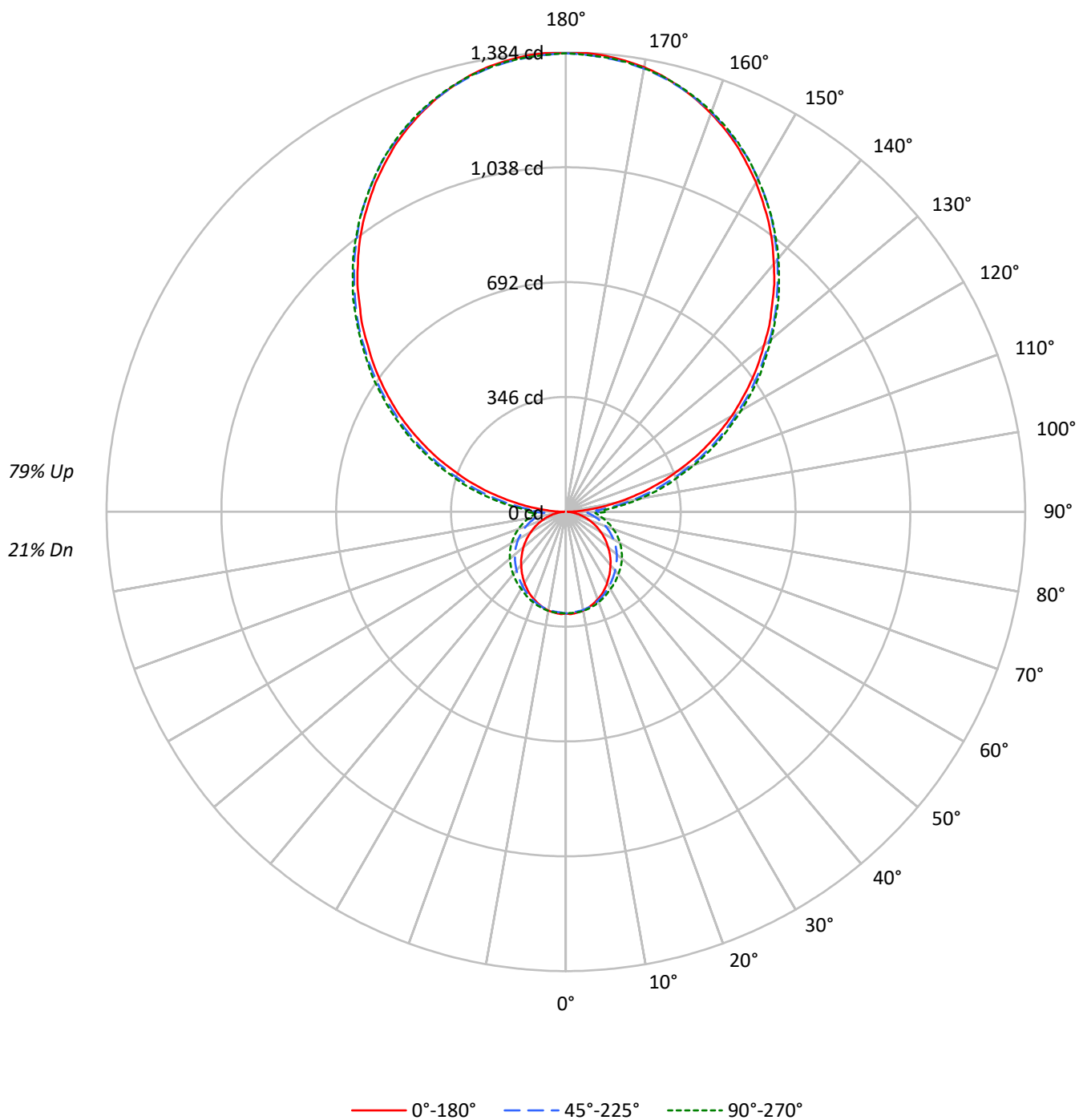
Lumens per Lamp: N/A
Luminaire Lumens: 5035.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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

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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	100	100	100	100	89	89	89	89	67	67	67	47	47	47	29	29	29
1	91	86	82	79	80	76	73	70	58	55	53	41	39	38	25	24	23
2	82	75	69	64	72	66	61	57	50	47	44	35	33	31	21	20	19
3	75	65	58	53	66	58	52	47	44	40	36	31	28	26	19	17	16
4	68	58	50	44	60	51	45	40	39	34	31	27	24	22	17	15	14
5	62	51	43	37	55	45	39	34	34	30	26	24	21	19	15	13	12
6	57	46	38	32	50	40	34	29	31	26	23	22	19	16	13	12	10
7	53	41	33	28	46	36	30	25	28	23	20	20	17	14	12	10	9
8	49	37	29	24	43	33	26	22	25	20	17	18	15	13	11	9	8
9	45	33	26	21	40	30	24	19	23	18	15	16	13	11	10	8	7
10	42	31	24	19	37	27	21	17	21	17	13	15	12	10	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4850	4850	4850
5°	4872	4643	4617
10°	4839	4483	4417
15°	4770	4315	4212
20°	4684	4141	4017
25°	4599	3973	3840
30°	4479	3804	3665
35°	4360	3639	3537
40°	4232	3498	3409
45°	4112	3370	3298
50°	3982	3252	3188
55°	3845	3126	3076
60°	3678	2994	2959
65°	3505	2843	2824
70°	3309	2682	2678
75°	3054	2520	2542
80°	2659	2351	2399
85°	2260	2192	2276

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4112 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	0.6
10°-20°	83.3	1.7
20°-30°	126.2	2.5
30°-40°	153.7	3.1
40°-50°	165.4	3.3
50°-60°	160.6	3.2
60°-70°	140.2	2.8
70°-80°	108.0	2.1
80°-90°	76.2	1.5
90°-100°	135.3	2.7
100°-110°	308.1	6.1
110°-120°	488.9	9.7
120°-130°	624.7	12.4
130°-140°	691.8	13.7
140°-150°	673.9	13.4
150°-160°	564.5	11.2
160°-170°	374.4	7.4
170°-180°	130.8	2.6
0°-30°	238.5	4.7
0°-40°	392.2	7.8
0°-60°	718.2	14.3
0°-90°	1042.6	20.7
90°-120°	932.3	18.5
90°-150°	2922.7	58.0
90°-180°	3992.0	79.3
0°-180°	5035.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	306	306	306	306	306	
5°	307	306	303	306	306	29
15°	293	294	294	298	298	83
25°	266	270	274	279	280	123
35°	230	237	246	255	258	143
45°	188	200	216	230	234	145
55°	144	160	183	199	205	129
65°	99	120	146	165	170	98
75°	55	80	108	127	133	58
85°	16	44	72	91	97	17
90°	6	45	99	115	121	7
95°	64	97	126	142	146	70
105°	253	269	295	312	317	267
115°	468	480	498	510	511	463
125°	679	690	700	709	712	607
135°	878	891	898	906	906	679
145°	1066	1074	1081	1084	1082	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	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	306.4	306.4	306.4	306.4	306.4
2.5°	308.6	307.3	304.1	306.4	305.5
5°	307.3	305.9	303.3	305.9	305.5
7.5°	305.0	304.1	301.9	305.0	304.6
10°	302.4	301.5	300.2	303.7	303.3
12.5°	297.9	298.4	297.5	301.0	300.6
15°	293.0	293.9	293.9	297.9	297.5
17.5°	286.8	288.6	289.9	293.9	293.9
20°	280.6	282.8	284.6	289.5	289.5
22.5°	274.0	276.6	279.3	284.2	285.1
25°	266.4	269.5	273.5	278.8	280.2
27.5°	257.5	262.4	266.9	273.5	274.4
30°	248.6	254.4	260.2	267.3	268.6
32.5°	238.9	245.5	252.6	261.1	263.7
35°	229.6	237.1	245.5	255.3	258.4
37.5°	219.3	227.8	238.4	249.1	252.2
40°	209.1	218.9	230.9	242.4	246.4
42.5°	199.4	209.1	223.3	236.2	240.2
45°	188.3	200.3	215.8	229.6	234.0
47.5°	177.6	190.5	208.2	222.5	227.3
50°	166.5	180.3	200.3	215.3	220.2
52.5°	155.8	170.5	191.8	207.4	212.7
55°	144.3	160.3	183.4	199.4	205.1
57.5°	133.2	151.0	174.1	191.4	197.1
60°	121.2	140.3	165.6	182.5	188.7
62.5°	110.6	130.5	155.8	174.1	179.8
65°	98.6	120.3	146.5	164.7	170.5
67.5°	87.9	110.6	137.2	155.4	161.6
70°	76.4	99.5	127.0	146.1	151.4
72.5°	65.7	89.7	117.7	136.3	143.0
75°	54.6	79.5	107.9	127.0	132.8
77.5°	44.0	69.7	98.6	117.7	123.9
80°	33.3	60.4	89.2	107.9	114.1
82.5°	24.4	51.1	80.4	99.0	104.8
85°	16.0	43.5	71.9	90.6	96.8
87.5°	9.8	36.4	64.8	83.0	88.8
90°	5.6	45.4	99.4	114.9	121.3
92.5°	29.6	62.5	90.7	109.2	114.6
95°	64.2	96.7	125.7	142.5	145.6
97.5°	104.5	134.1	164.6	181.0	186.3
100°	151.1	176.9	205.3	221.7	225.4
102.5°	199.7	221.3	250.0	267.1	270.9
105°	252.8	269.2	294.7	312.5	317.4
107.5°	306.5	321.8	344.0	360.3	359.4
110°	357.3	373.2	394.9	409.1	410.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	413.3	427.4	446.6	457.3	459.9
115°	468.1	480.0	497.6	509.8	511.1
117.5°	522.4	535.3	548.1	558.0	558.9
120°	577.2	588.3	596.8	609.2	610.6
122.5°	627.3	639.4	650.0	658.5	660.2
125°	679.3	689.8	700.5	709.0	711.9
127.5°	730.6	743.0	750.3	756.7	757.2
130°	778.4	793.1	800.2	808.4	807.4
132.5°	832.1	843.2	851.1	855.5	855.6
135°	878.2	891.0	897.8	906.0	906.1
137.5°	929.5	940.0	944.6	951.8	950.3
140°	974.9	985.0	991.8	998.9	996.9
142.5°	1021.6	1031.7	1035.2	1041.6	1039.2
145°	1065.5	1073.6	1080.6	1084.5	1082.0
147.5°	1105.1	1115.6	1120.3	1123.0	1119.7
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

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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	7.04	7.71	8.21	8.86	10.50	10.11	10.78	11.28	11.94	13.57
	3H	8.49	9.09	9.66	10.25	11.90	12.69	13.29	13.87	14.45	16.10
	4H	8.96	9.53	10.14	10.69	12.34	13.94	14.51	15.12	15.67	17.32
	6H	9.23	9.76	10.42	10.92	12.58	15.22	15.75	16.41	16.91	18.58
	8H	9.28	9.78	10.48	10.96	12.62	15.88	16.38	17.07	17.56	19.21
	12H	9.29	9.77	10.49	10.94	12.62	16.60	17.07	17.79	18.25	19.92
4H	2H	8.07	8.64	9.26	9.80	11.46	10.42	10.99	11.61	12.16	13.81
	3H	9.76	10.24	10.96	11.43	13.09	13.20	13.68	14.39	14.87	16.53
	4H	10.38	10.82	11.57	12.00	13.68	14.61	15.05	15.80	16.23	17.91
	6H	10.78	11.16	11.98	12.36	14.03	16.07	16.45	17.27	17.65	19.32
	8H	10.89	11.24	12.08	12.43	14.12	16.82	17.18	18.02	18.37	20.05
	12H	10.92	11.24	12.13	12.44	14.14	17.64	17.96	18.85	19.16	20.86
8H	4H	11.15	11.51	12.35	12.70	14.39	14.74	15.09	15.94	16.28	17.97
	6H	11.78	12.07	12.99	13.30	14.99	16.36	16.66	17.58	17.89	19.57
	8H	12.00	12.25	13.22	13.46	15.17	17.25	17.50	18.47	18.71	20.42
	12H	12.12	12.35	13.34	13.55	15.29	18.23	18.46	19.46	19.67	21.40
12H	4H	11.34	11.66	12.55	12.86	14.56	14.70	15.03	15.92	16.23	17.92
	6H	12.11	12.37	13.33	13.58	15.28	16.38	16.64	17.60	17.85	19.55
	8H	12.40	12.63	13.63	13.84	15.57	17.30	17.53	18.53	18.74	20.47