

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: P998166

Luminaire Tested: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998166
REPORT IS A COMBINATION OF REPORTS P983906 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

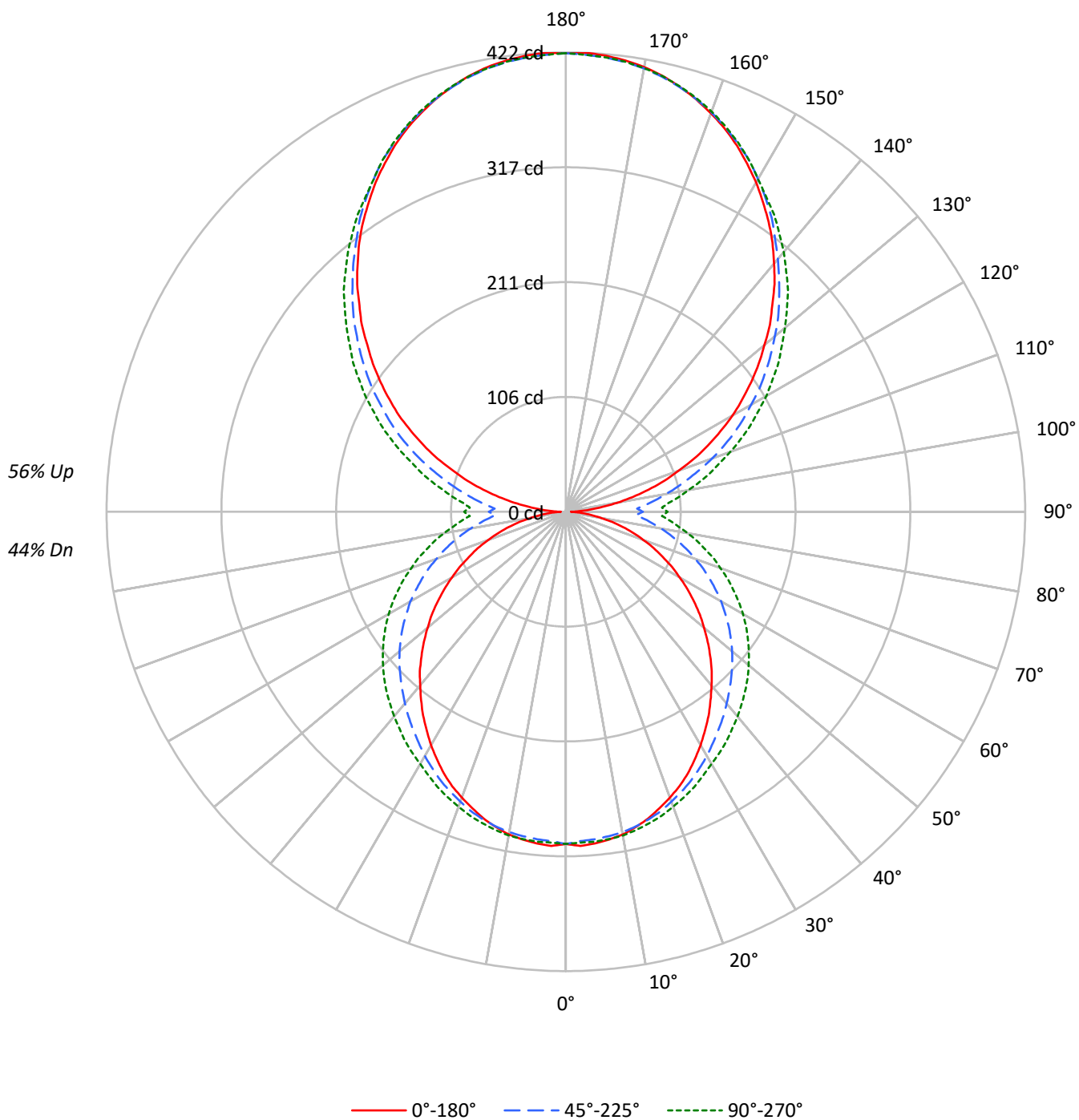
Lumens per Lamp: N/A
Luminaire Lumens: 2343.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 22.3
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: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

Luminous Intensity Polar Plot



TEST NUMBER: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51
1	95	90	86	82	87	83	79	75	68	65	63	55	53	51	43	41	40
2	86	78	71	66	78	71	66	61	59	55	51	47	44	42	37	35	33
3	78	68	60	54	71	62	56	50	52	46	42	42	38	35	32	30	27
4	71	60	52	45	65	55	48	42	46	40	36	37	33	29	29	26	23
5	65	53	45	39	59	49	41	36	41	35	30	33	29	25	26	22	20
6	60	48	39	33	55	44	36	31	36	31	26	30	25	22	23	20	17
7	55	43	35	29	50	39	32	27	33	27	23	27	22	19	21	18	15
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	14
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	18	15	12
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4850	4623	4597
10°	4818	4463	4398
15°	4750	4297	4193
20°	4664	4123	4000
25°	4580	3956	3824
30°	4461	3788	3650
35°	4341	3624	3522
40°	4214	3483	3395
45°	4095	3356	3284
50°	3965	3237	3175
55°	3829	3112	3064
60°	3663	2981	2947
65°	3487	2832	2812
70°	3291	2670	2668
75°	3043	2509	2530
80°	2651	2343	2388
85°	2246	2183	2267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4095 cd/sqm

TEST NUMBER: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.9	1.2
10°-20°	82.9	3.5
20°-30°	125.7	5.4
30°-40°	153.0	6.5
40°-50°	164.7	7.0
50°-60°	159.9	6.8
60°-70°	139.6	6.0
70°-80°	107.5	4.6
80°-90°	73.2	3.1
90°-100°	75.7	3.2
100°-110°	119.1	5.1
110°-120°	165.7	7.1
120°-130°	199.8	8.5
130°-140°	214.9	9.2
140°-150°	206.2	8.8
150°-160°	172.1	7.3
160°-170°	114.2	4.9
170°-180°	39.9	1.7
0°-30°	237.5	10.1
0°-40°	390.6	16.7
0°-60°	715.1	30.5
0°-90°	1035.4	44.2
90°-120°	360.5	15.4
90°-150°	981.3	41.9
90°-180°	1308.0	55.8
0°-180°	2343.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	305	305	305	305	305	
5°	306	305	302	305	304	29
15°	292	293	293	297	296	82
25°	265	268	272	278	279	122
35°	229	236	244	254	257	143
45°	188	199	215	229	233	145
55°	144	160	183	198	204	129
65°	98	120	146	164	170	98
75°	54	79	107	126	132	58
85°	16	43	72	90	96	17
90°	5	35	71	88	93	4
95°	22	46	74	90	95	23
105°	79	92	116	132	137	83
115°	144	151	170	183	187	142
125°	208	211	224	235	238	186
135°	268	272	277	286	289	207
145°	325	327	330	333	333	203
155°	372	373	374	375	374	171
165°	404	404	404	406	405	114
175°	421	420	419	421	419	40
180°	421	421	421	421	421	

TEST NUMBER: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	305.1	305.1	305.1	305.1	305.1
2.5°	307.3	305.9	302.8	305.1	304.2
5°	305.9	304.6	302.0	304.6	304.2
7.5°	303.7	302.8	300.6	303.7	303.3
10°	301.1	300.2	298.9	302.4	302.0
12.5°	296.7	297.1	296.2	299.8	299.3
15°	291.8	292.7	292.7	296.7	296.2
17.5°	285.6	287.4	288.7	292.7	292.7
20°	279.4	281.6	283.4	288.3	288.3
22.5°	272.8	275.4	278.1	283.0	283.8
25°	265.3	268.4	272.3	277.6	279.0
27.5°	256.4	261.3	265.7	272.3	273.2
30°	247.6	253.3	259.1	266.2	267.5
32.5°	237.9	244.5	251.6	260.0	262.6
35°	228.6	236.1	244.5	254.2	257.3
37.5°	218.4	226.8	237.4	248.0	251.1
40°	208.2	218.0	229.9	241.4	245.4
42.5°	198.5	208.2	222.4	235.2	239.2
45°	187.5	199.4	214.9	228.6	233.0
47.5°	176.8	189.7	207.4	221.5	226.4
50°	165.8	179.5	199.4	214.4	219.3
52.5°	155.2	169.8	191.0	206.5	211.8
55°	143.7	159.6	182.6	198.5	204.3
57.5°	132.6	150.3	173.3	190.6	196.3
60°	120.7	139.7	164.9	181.7	187.9
62.5°	110.1	130.0	155.2	173.3	179.1
65°	98.1	119.8	145.9	164.0	169.8
67.5°	87.5	110.1	136.6	154.7	160.9
70°	76.0	99.0	126.4	145.5	150.8
72.5°	65.4	89.3	117.2	135.7	142.4
75°	54.4	79.1	107.4	126.4	132.2
77.5°	43.8	69.4	98.1	117.2	123.4
80°	33.2	60.1	88.9	107.4	113.6
82.5°	24.3	50.8	80.0	98.6	104.3
85°	15.9	43.3	71.6	90.2	96.4
87.5°	9.7	36.3	64.5	82.7	88.4
90°	4.8	34.7	70.8	87.7	93.4
92.5°	11.8	38.1	65.4	83.0	88.3
95°	22.0	46.3	73.6	90.4	94.9
97.5°	34.0	56.2	83.3	99.7	105.0
100°	48.2	67.5	93.3	109.7	114.1
102.5°	62.8	79.4	104.7	121.0	125.5
105°	78.6	92.5	116.2	132.4	137.3
107.5°	95.0	107.0	129.1	144.6	147.6
110°	110.2	121.2	142.9	157.0	160.8

TEST NUMBER: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	127.3	136.4	156.5	169.5	173.7
115°	144.0	150.9	170.1	183.1	186.9
117.5°	160.2	166.7	183.4	195.6	198.9
120°	176.9	181.6	196.4	208.8	212.6
122.5°	192.2	196.3	210.8	221.7	224.9
125°	207.8	211.0	224.0	235.0	238.5
127.5°	223.4	226.9	237.4	247.0	249.9
130°	238.0	242.1	250.7	260.6	262.8
132.5°	254.4	257.4	264.5	272.8	275.3
135°	268.1	272.0	277.2	286.1	288.6
137.5°	283.7	286.9	289.9	298.0	299.6
140°	297.6	300.4	303.1	310.2	311.4
142.5°	311.8	314.6	315.7	321.3	322.1
145°	324.9	327.4	329.6	332.6	333.4
147.5°	337.0	340.2	341.6	342.8	342.7
150°	349.5	351.6	353.0	354.1	353.0
152.5°	360.5	362.6	364.4	365.8	364.4
155°	371.5	372.6	373.6	375.4	374.3
157.5°	381.1	381.8	382.5	385.0	383.2
160°	389.6	390.3	390.7	392.8	391.4
162.5°	397.5	397.5	397.8	400.3	398.5
165°	404.2	403.9	403.9	406.3	404.6
167.5°	410.3	409.2	409.2	411.7	409.9
170°	414.9	413.8	413.5	415.9	413.8
172.5°	418.1	417.0	416.7	419.1	417.0
175°	420.6	419.5	418.8	421.3	419.1
177.5°	422.0	420.9	420.2	422.3	420.2
180°	421.3	421.3	421.3	421.3	421.3

TEST NUMBER: P998166

CATALOG NUMBER: SA2XXDIP-B290D330UB30-4F0-XX-W2A-D1

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	10.12	10.98	11.12	11.99	13.34	13.20	14.06	14.20	15.07	16.42
	3H	11.58	12.36	12.59	13.38	14.75	15.79	16.56	16.79	17.58	18.95
	4H	12.06	12.79	13.08	13.82	15.19	17.04	17.78	18.06	18.80	20.18
	6H	12.34	13.02	13.37	14.05	15.44	18.34	19.02	19.37	20.05	21.44
	8H	12.40	13.05	13.44	14.10	15.48	19.00	19.65	20.03	20.69	22.08
	12H	12.42	13.04	13.46	14.08	15.49	19.72	20.34	20.76	21.38	22.79
4H	2H	11.17	11.91	12.20	12.93	14.31	13.53	14.27	14.55	15.29	16.67
	3H	12.88	13.50	13.91	14.56	15.94	16.32	16.94	17.35	18.00	19.38
	4H	13.50	14.08	14.54	15.12	16.53	17.74	18.31	18.77	19.35	20.76
	6H	13.92	14.42	14.97	15.48	16.89	19.20	19.70	20.25	20.77	22.17
	8H	14.03	14.49	15.08	15.55	16.98	19.96	20.43	21.01	21.49	22.91
	12H	14.07	14.49	15.14	15.57	17.00	20.79	21.22	21.86	22.29	23.72
8H	4H	14.29	14.76	15.34	15.82	17.24	17.88	18.35	18.93	19.41	20.83
	6H	14.92	15.32	16.00	16.42	17.84	19.51	19.90	20.58	21.00	22.42
	8H	15.15	15.49	16.23	16.58	18.02	20.40	20.75	21.48	21.83	23.27
	12H	15.28	15.59	16.36	16.67	18.14	21.39	21.70	22.48	22.78	24.26
12H	4H	14.49	14.92	15.56	15.99	17.42	17.85	18.28	18.92	19.35	20.78
	6H	15.26	15.61	16.34	16.69	18.13	19.53	19.88	20.61	20.97	22.40
	8H	15.56	15.87	16.65	16.95	18.43	20.46	20.77	21.55	21.85	23.33