

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: P998154

Luminaire Tested: SA2XXDIP-B290D330UB2750-4F0-XX-W2A-D_3500K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998154
REPORT IS A COMBINATION OF REPORTS P983894 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB2750-4F0-XX-W2A-D_3500K
Description: Define 2 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

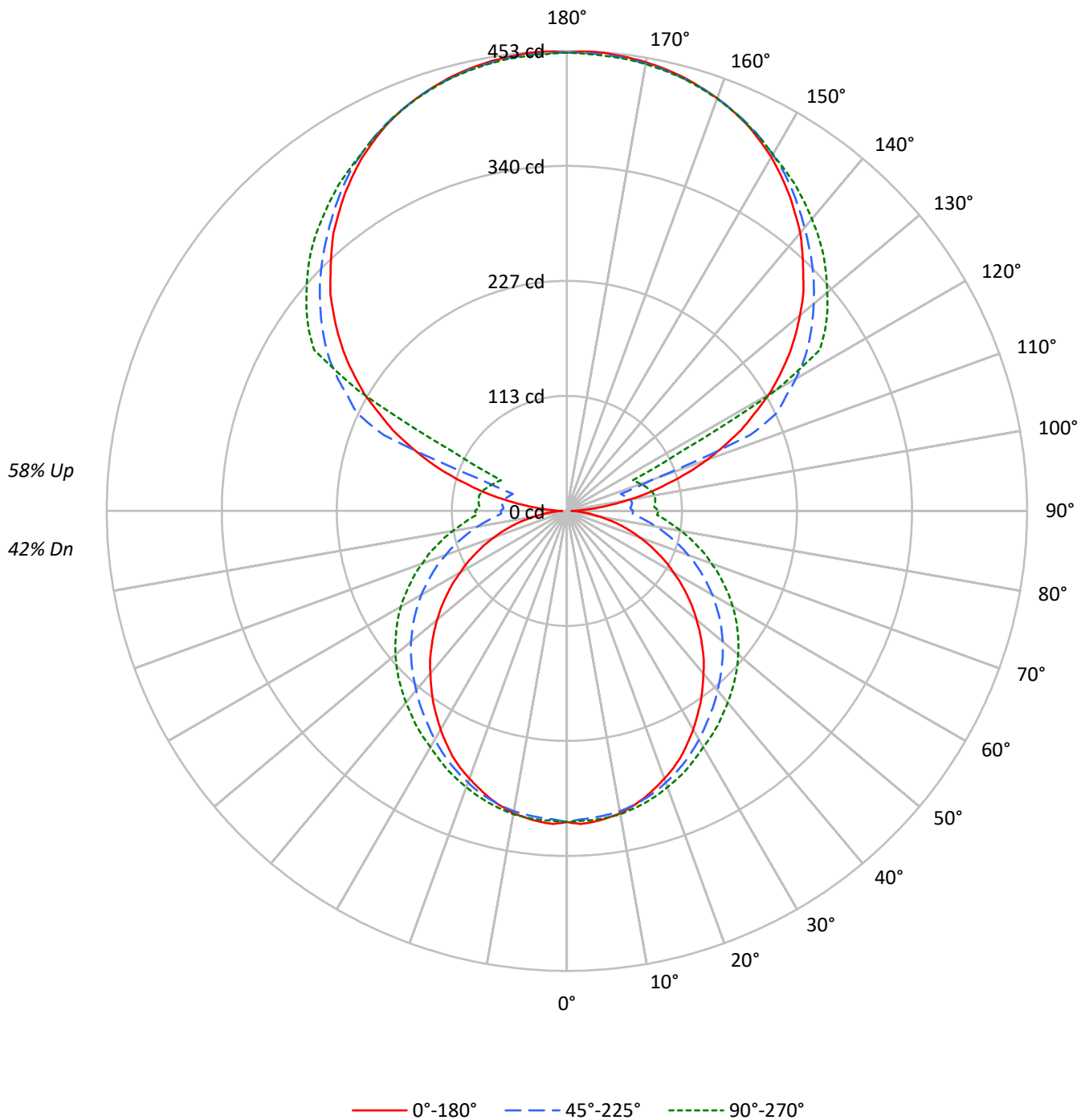
Lumens per Lamp: N/A
Luminaire Lumens: 2493.0 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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

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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48
1	95	90	86	82	86	82	78	75	67	64	62	53	52	50	41	40	38
2	86	78	71	66	78	71	65	60	58	54	50	46	43	41	35	33	31
3	78	68	60	54	70	62	55	50	51	46	42	40	37	34	31	28	26
4	71	60	52	45	64	55	47	42	45	39	35	36	32	29	27	24	22
5	65	53	45	38	59	48	41	36	40	34	30	32	28	24	24	21	19
6	60	47	39	33	54	43	36	31	36	30	26	29	24	21	22	19	17
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15
8	51	39	31	25	46	35	28	24	29	24	20	24	20	17	18	15	13
9	47	35	28	22	43	32	25	21	27	22	18	22	18	15	17	14	12
10	44	32	25	20	40	30	23	19	25	19	16	20	16	13	16	13	11

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	1.2
10°-20°	83.3	3.3
20°-30°	126.2	5.1
30°-40°	153.7	6.2
40°-50°	165.4	6.6
50°-60°	160.6	6.4
60°-70°	140.2	5.6
70°-80°	108.0	4.3
80°-90°	73.1	2.9
90°-100°	64.8	2.6
100°-110°	91.9	3.7
110°-120°	171.2	6.9
120°-130°	257.4	10.3
130°-140°	264.9	10.6
140°-150°	241.9	9.7
150°-160°	193.7	7.8
160°-170°	124.8	5.0
170°-180°	43.0	1.7
0°-30°	238.5	9.6
0°-40°	392.2	15.7
0°-60°	718.2	28.8
0°-90°	1039.5	41.7
90°-120°	327.9	13.2
90°-150°	1092.0	43.8
90°-180°	1454.0	58.3
0°-180°	2493.0	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°	5	34	65	85	90	4
95°	25	35	64	82	87	28
105°	102	124	58	77	83	109
115°	190	200	228	90	72	186
125°	266	271	291	305	310	238
135°	329	334	342	354	357	254
145°	381	381	386	391	392	238
155°	420	417	421	423	420	193
165°	442	440	441	444	441	125
175°	452	450	451	453	450	43
180°	451	451	451	451	451	

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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°	4.7	34.1	65.1	84.6	90.5
92.5°	12.2	34.4	62.4	80.4	86.1
95°	24.8	34.9	63.8	82.3	87.3
97.5°	41.3	33.6	64.7	82.0	87.7
100°	60.9	32.6	63.0	82.0	87.6
102.5°	82.1	96.0	60.6	80.2	86.0
105°	101.5	124.2	58.1	77.2	83.4
107.5°	124.7	143.5	55.7	74.4	80.6
110°	146.5	162.2	89.6	71.1	77.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	167.4	180.4	195.2	68.6	74.5
115°	189.6	200.0	228.1	90.3	71.6
117.5°	208.4	218.5	242.6	209.3	128.2
120°	229.9	236.6	260.3	276.6	237.4
122.5°	248.2	253.9	276.9	290.8	295.1
125°	266.4	270.7	291.1	305.4	310.3
127.5°	283.4	287.5	304.4	318.7	323.1
130°	299.4	304.1	317.1	331.3	334.6
132.5°	315.7	319.5	329.8	342.9	346.2
135°	329.0	334.2	341.6	354.2	357.1
137.5°	343.3	347.2	352.8	364.5	366.6
140°	357.4	359.6	364.1	374.1	375.2
142.5°	369.1	371.0	375.3	383.2	383.7
145°	381.1	380.8	386.4	391.3	391.9
147.5°	391.9	390.9	396.5	398.5	398.6
150°	402.4	400.1	405.3	407.3	405.6
152.5°	411.2	408.6	413.5	415.4	413.1
155°	419.7	416.7	420.7	422.6	420.0
157.5°	426.5	423.9	426.9	429.1	426.5
160°	432.4	430.5	432.4	434.4	432.1
162.5°	437.6	435.7	437.3	439.6	436.7
165°	442.2	440.2	441.2	443.5	441.2
167.5°	445.8	443.8	444.8	447.1	444.2
170°	448.7	446.8	447.4	449.7	446.8
172.5°	450.7	448.7	449.4	451.7	448.7
175°	452.3	450.0	450.7	453.0	449.7
177.5°	453.0	450.7	451.0	453.3	450.4
180°	451.4	451.4	451.4	451.4	451.4

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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	9.89	10.72	10.90	11.75	13.13	12.96	13.79	13.98	14.83	16.21
	3H	11.35	12.10	12.37	13.14	14.54	15.55	16.30	16.57	17.34	18.74
	4H	11.82	12.54	12.86	13.58	14.99	16.80	17.52	17.84	18.56	19.97
	6H	12.10	12.77	13.15	13.81	15.23	18.10	18.76	19.14	19.80	21.22
	8H	12.16	12.79	13.21	13.86	15.27	18.76	19.39	19.81	20.45	21.87
	12H	12.18	12.78	13.24	13.84	15.28	19.48	20.08	20.54	21.14	22.58
4H	2H	10.94	11.65	11.98	12.69	14.10	13.29	14.00	14.33	15.05	16.45
	3H	12.64	13.25	13.69	14.31	15.74	16.08	16.68	17.13	17.75	19.17
	4H	13.26	13.82	14.32	14.88	16.32	17.49	18.05	18.55	19.11	20.55
	6H	13.68	14.16	14.74	15.24	16.68	18.96	19.44	20.03	20.53	21.96
	8H	13.78	14.24	14.85	15.31	16.77	19.72	20.17	20.78	21.25	22.70
	12H	13.83	14.24	14.91	15.33	16.79	20.54	20.96	21.63	22.05	23.51
8H	4H	14.05	14.50	15.12	15.58	17.03	17.64	18.09	18.70	19.17	20.62
	6H	14.68	15.06	15.77	16.18	17.63	19.26	19.64	20.35	20.76	22.21
	8H	14.90	15.24	16.00	16.34	17.81	20.15	20.49	21.25	21.59	23.06
	12H	15.04	15.33	16.14	16.43	17.94	21.15	21.44	22.25	22.54	24.05
12H	4H	14.25	14.66	15.33	15.75	17.21	17.61	18.02	18.69	19.11	20.57
	6H	15.02	15.35	16.11	16.45	17.92	19.29	19.63	20.38	20.73	22.19
	8H	15.32	15.62	16.42	16.71	18.22	20.22	20.51	21.32	21.61	23.12