

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: P998143

Luminaire Tested: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998143
REPORT IS A COMBINATION OF REPORTS P983883 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4
Description: Define 2 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

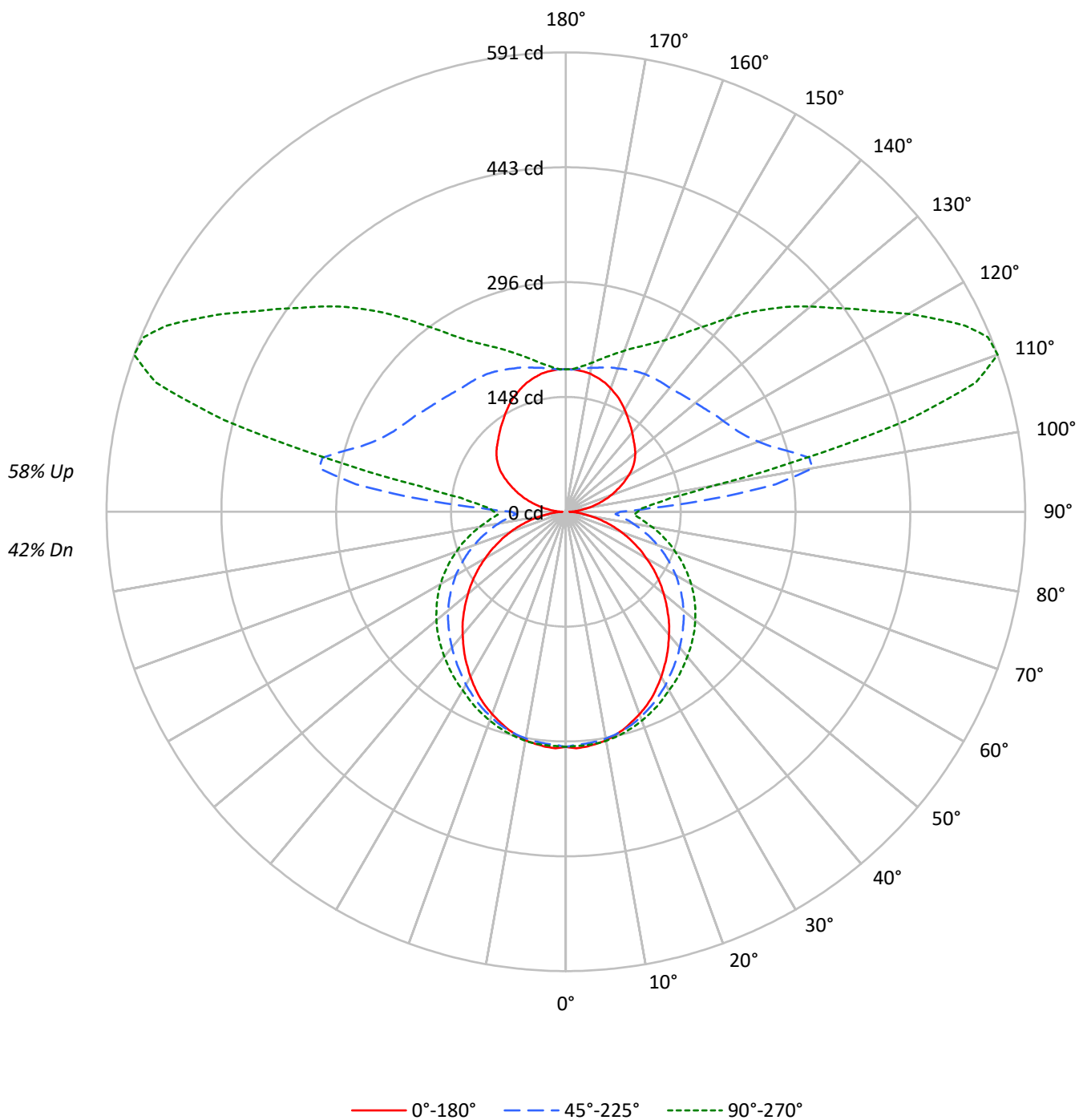
Lumens per Lamp: N/A
Luminaire Lumens: 2432.5 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

Luminous Intensity Polar Plot



TEST NUMBER: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

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	49	49	49
1	95	90	86	82	86	82	78	75	67	65	62	54	52	50	41	40	39
2	86	78	71	66	78	71	65	60	58	54	50	46	43	41	36	34	32
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	31	29	26
4	71	60	52	45	64	55	47	42	45	40	35	36	32	29	28	25	22
5	65	53	45	38	59	49	41	36	40	34	30	32	28	25	25	22	19
6	60	47	39	33	54	43	36	31	36	30	26	29	25	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	19	15	13
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4787	4787	4787
5°	4809	4584	4558
10°	4777	4424	4360
15°	4709	4261	4158
20°	4624	4088	3965
25°	4541	3923	3791
30°	4423	3755	3618
35°	4303	3593	3491
40°	4177	3453	3366
45°	4058	3326	3256
50°	3931	3210	3147
55°	3797	3085	3037
60°	3632	2956	2921
65°	3459	2806	2787
70°	3265	2648	2645
75°	3015	2488	2509
80°	2627	2322	2367
85°	2232	2165	2248

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4058 cd/sqm

TEST NUMBER: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.7	1.2
10°-20°	82.2	3.4
20°-30°	124.6	5.1
30°-40°	151.7	6.2
40°-50°	163.2	6.7
50°-60°	158.5	6.5
60°-70°	138.4	5.7
70°-80°	106.6	4.4
80°-90°	72.5	3.0
90°-100°	123.5	5.1
100°-110°	287.0	11.8
110°-120°	287.6	11.8
120°-130°	230.3	9.5
130°-140°	179.9	7.4
140°-150°	132.7	5.5
150°-160°	92.6	3.8
160°-170°	54.5	2.2
170°-180°	17.7	0.7
0°-30°	235.5	9.7
0°-40°	387.2	15.9
0°-60°	709.0	29.1
0°-90°	1026.5	42.2
90°-120°	698.2	28.7
90°-150°	1241.0	51.0
90°-180°	1406.0	57.8
0°-180°	2432.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	302	302	302	302	302	
5°	303	302	299	302	302	29
15°	289	290	290	294	294	81
25°	263	266	270	275	277	121
35°	227	234	242	252	255	142
45°	186	198	213	227	231	143
55°	142	158	181	197	202	127
65°	97	119	145	163	168	97
75°	54	78	106	125	131	57
85°	16	43	71	89	96	17
90°	5	35	70	87	92	4
95°	16	54	188	119	112	15
105°	45	80	299	520	455	48
115°	78	102	245	490	567	77
125°	107	126	225	392	454	95
135°	124	148	212	321	369	96
145°	142	163	206	259	285	89
155°	161	174	200	227	236	74
165°	176	181	192	204	207	49
175°	183	183	185	187	186	17
180°	183	183	183	183	183	

TEST NUMBER: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	302.4	302.4	302.4	302.4	302.4
2.5°	304.6	303.3	300.2	302.4	301.6
5°	303.3	302.0	299.4	302.0	301.6
7.5°	301.1	300.2	298.1	301.1	300.7
10°	298.5	297.6	296.3	299.8	299.4
12.5°	294.1	294.5	293.7	297.2	296.7
15°	289.3	290.2	290.2	294.1	293.7
17.5°	283.2	284.9	286.2	290.2	290.2
20°	277.0	279.2	281.0	285.8	285.8
22.5°	270.4	273.1	275.7	280.5	281.4
25°	263.0	266.1	270.0	275.3	276.6
27.5°	254.2	259.0	263.4	270.0	270.9
30°	245.5	251.2	256.9	263.9	265.2
32.5°	235.8	242.4	249.4	257.7	260.4
35°	226.6	234.1	242.4	252.0	255.1
37.5°	216.5	224.9	235.4	245.9	249.0
40°	206.4	216.1	227.9	239.3	243.3
42.5°	196.8	206.4	220.5	233.2	237.1
45°	185.8	197.7	213.0	226.6	231.0
47.5°	175.3	188.0	205.6	219.6	224.4
50°	164.4	178.0	197.7	212.6	217.4
52.5°	153.8	168.3	189.4	204.7	210.0
55°	142.5	158.2	181.0	196.8	202.5
57.5°	131.5	149.0	171.8	188.9	194.6
60°	119.7	138.5	163.5	180.1	186.3
62.5°	109.1	128.9	153.8	171.8	177.5
65°	97.3	118.8	144.6	162.6	168.3
67.5°	86.8	109.1	135.4	153.4	159.5
70°	75.4	98.2	125.4	144.2	149.5
72.5°	64.9	88.5	116.2	134.6	141.1
75°	53.9	78.5	106.5	125.4	131.1
77.5°	43.4	68.8	97.3	116.2	122.3
80°	32.9	59.6	88.1	106.5	112.6
82.5°	24.1	50.4	79.3	97.7	103.4
85°	15.8	43.0	71.0	89.4	95.6
87.5°	9.6	35.9	64.0	82.0	87.7
90°	4.8	34.6	69.9	86.9	92.3
92.5°	9.2	44.0	108.2	96.0	97.8
95°	15.8	54.4	188.5	119.2	112.5
97.5°	21.4	61.8	272.4	168.2	136.1
100°	30.2	68.2	322.1	268.4	191.0
102.5°	37.8	74.2	320.9	408.8	307.3
105°	45.2	79.8	298.8	519.6	455.0
107.5°	53.6	85.2	278.0	557.6	553.3
110°	61.7	91.0	263.5	547.3	591.2

TEST NUMBER: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	69.4	96.9	252.6	521.6	587.5
115°	77.5	102.2	244.7	490.2	566.8
117.5°	85.5	108.0	238.8	460.6	537.2
120°	93.3	113.8	233.7	433.3	509.1
122.5°	100.7	120.0	229.7	411.7	479.1
125°	106.6	126.0	224.9	391.9	454.5
127.5°	111.9	132.0	221.2	374.1	430.9
130°	116.5	137.8	217.8	356.7	410.9
132.5°	120.7	143.5	214.9	338.6	390.5
135°	124.4	148.4	212.3	320.8	368.8
137.5°	128.3	152.6	210.1	303.1	347.3
140°	132.9	156.1	208.1	287.0	325.1
142.5°	137.4	159.2	207.2	271.8	303.4
145°	141.6	162.8	206.5	258.9	285.2
147.5°	146.6	165.6	205.4	247.7	268.5
150°	151.5	168.4	204.3	239.6	254.7
152.5°	156.4	171.2	202.6	233.0	244.5
155°	161.0	173.8	200.5	226.8	235.7
157.5°	164.9	176.0	198.4	220.7	227.9
160°	168.8	178.1	196.2	214.8	220.5
162.5°	172.6	179.7	194.5	209.1	213.5
165°	175.5	180.8	192.0	203.6	206.8
167.5°	177.9	181.8	189.9	198.7	200.5
170°	180.4	182.3	188.1	194.2	194.8
172.5°	181.8	182.8	186.0	190.0	190.2
175°	182.8	183.0	184.6	186.9	186.4
177.5°	183.6	183.2	183.2	184.6	183.6
180°	183.2	183.2	183.2	183.2	183.2

TEST NUMBER: P998143

CATALOG NUMBER: SA2XXDIP-B290D330UB27-4F0-XX-W2A-D4

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	10.73	10.90	11.76	13.13	12.97	13.80	13.98	14.83	16.21
	3H	11.35	12.11	12.37	13.14	14.54	15.56	16.31	16.58	17.35	18.74
	4H	11.83	12.54	12.86	13.58	14.98	16.81	17.53	17.84	18.57	19.97
	6H	12.11	12.77	13.15	13.82	15.23	18.10	18.77	19.15	19.81	21.22
	8H	12.17	12.80	13.22	13.86	15.27	18.76	19.40	19.81	20.46	21.86
	12H	12.18	12.79	13.24	13.84	15.28	19.49	20.09	20.54	21.14	22.58
4H	2H	10.94	11.66	11.98	12.70	14.10	13.30	14.01	14.33	15.05	16.45
	3H	12.65	13.25	13.69	14.32	15.73	16.09	16.69	17.13	17.76	19.17
	4H	13.27	13.83	14.32	14.89	16.32	17.50	18.06	18.55	19.12	20.55
	6H	13.68	14.17	14.74	15.25	16.68	18.97	19.45	20.03	20.54	21.96
	8H	13.79	14.25	14.85	15.32	16.77	19.72	20.18	20.79	21.25	22.70
	12H	13.83	14.25	14.91	15.33	16.79	20.55	20.97	21.63	22.05	23.51
8H	4H	14.06	14.51	15.12	15.59	17.03	17.64	18.10	18.71	19.17	20.62
	6H	14.69	15.07	15.77	16.19	17.63	19.27	19.65	20.36	20.77	22.21
	8H	14.91	15.25	16.00	16.35	17.81	20.16	20.50	21.25	21.60	23.06
	12H	15.04	15.34	16.14	16.44	17.94	21.15	21.45	22.25	22.55	24.05
12H	4H	14.25	14.67	15.34	15.76	17.21	17.62	18.03	18.70	19.12	20.57
	6H	15.02	15.36	16.11	16.46	17.92	19.30	19.64	20.39	20.73	22.19
	8H	15.32	15.62	16.42	16.72	18.22	20.22	20.52	21.32	21.62	23.12