

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: P998194

Luminaire Tested: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998194
REPORT IS A COMBINATION OF REPORTS P983934 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

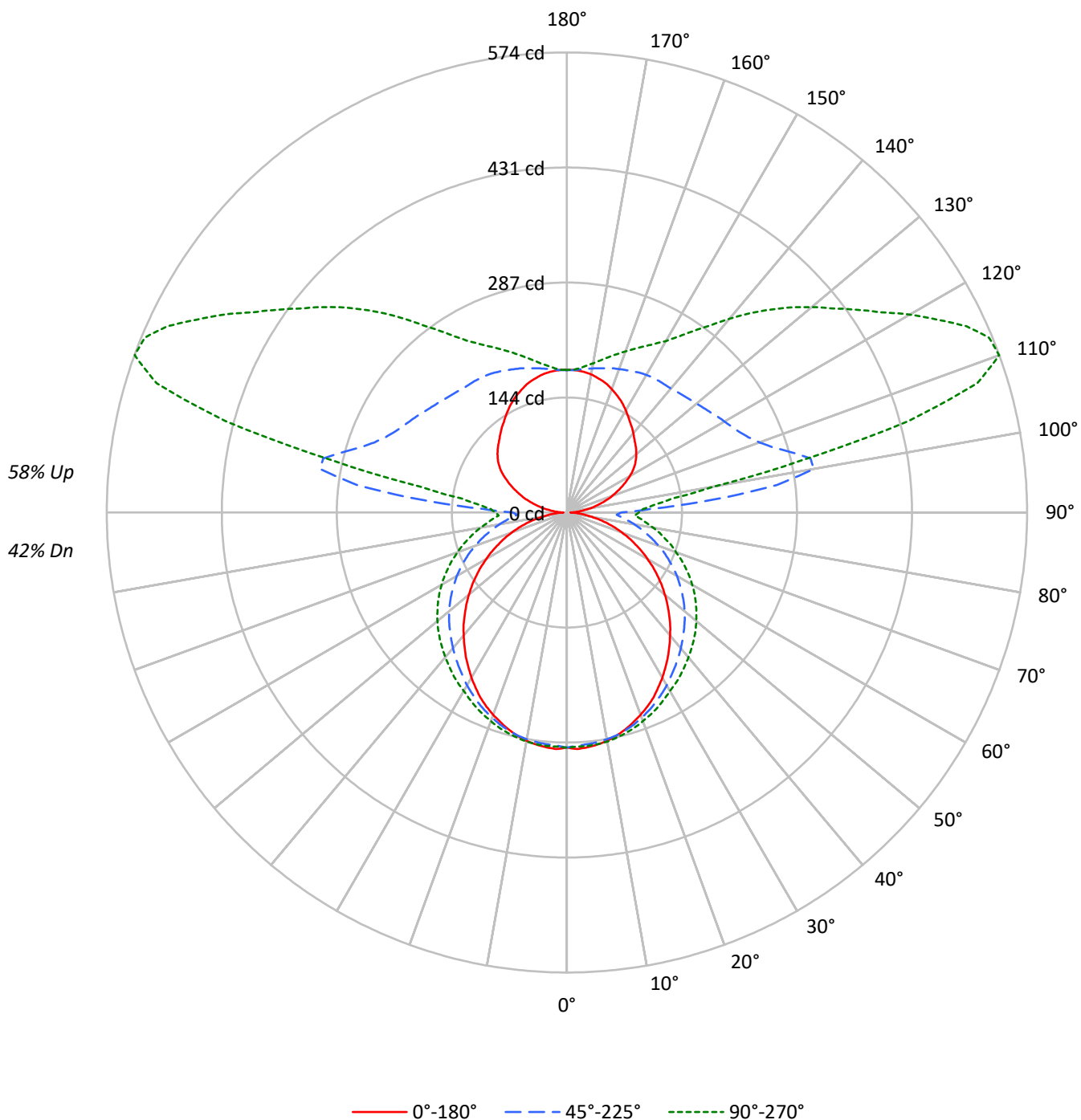
Lumens per Lamp: N/A
Luminaire Lumens: 2359.5 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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

TEST NUMBER: P998194

CATALOG NUMBER: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4

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	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	33	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°	4643	4643	4643
5°	4663	4444	4419
10°	4631	4290	4228
15°	4566	4131	4032
20°	4484	3963	3845
25°	4402	3803	3676
30°	4288	3641	3508
35°	4172	3483	3386
40°	4052	3348	3264
45°	3936	3226	3157
50°	3812	3112	3052
55°	3680	2991	2946
60°	3520	2866	2832
65°	3356	2723	2703
70°	3166	2568	2563
75°	2926	2413	2433
80°	2547	2250	2296
85°	2161	2101	2180

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3936 cd/sqm

TEST NUMBER: P998194

CATALOG NUMBER: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.8	1.2
10°-20°	79.7	3.4
20°-30°	120.8	5.1
30°-40°	147.1	6.2
40°-50°	158.3	6.7
50°-60°	153.7	6.5
60°-70°	134.3	5.7
70°-80°	103.3	4.4
80°-90°	70.4	3.0
90°-100°	119.8	5.1
100°-110°	278.5	11.8
110°-120°	279.1	11.8
120°-130°	223.4	9.5
130°-140°	174.6	7.4
140°-150°	128.7	5.5
150°-160°	89.9	3.8
160°-170°	52.9	2.2
170°-180°	17.2	0.7
0°-30°	228.3	9.7
0°-40°	375.5	15.9
0°-60°	687.5	29.1
0°-90°	995.4	42.2
90°-120°	677.4	28.7
90°-150°	1204.1	51.0
90°-180°	1364.0	57.8
0°-180°	2359.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	293	293	293	293	293	
5°	294	293	290	293	292	28
15°	280	281	281	285	285	79
25°	255	258	262	267	268	117
35°	220	227	235	244	247	137
45°	180	192	207	220	224	139
55°	138	153	176	191	196	124
65°	94	115	140	158	163	94
75°	52	76	103	122	127	55
85°	15	42	69	87	93	16
90°	5	34	68	84	90	4
95°	15	53	183	116	109	15
105°	44	77	290	504	441	47
115°	75	99	237	476	550	74
125°	103	122	218	380	441	92
135°	121	144	206	311	358	93
145°	137	158	200	251	277	86
155°	156	169	194	220	229	72
165°	170	175	186	198	201	48
175°	177	178	179	181	181	17
180°	178	178	178	178	178	

TEST NUMBER: P998194

CATALOG NUMBER: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	293.3	293.3	293.3	293.3	293.3
2.5°	295.4	294.1	291.1	293.3	292.4
5°	294.1	292.8	290.3	292.8	292.4
7.5°	292.0	291.1	289.0	292.0	291.6
10°	289.4	288.6	287.3	290.7	290.3
12.5°	285.2	285.6	284.8	288.2	287.7
15°	280.5	281.4	281.4	285.2	284.8
17.5°	274.6	276.3	277.5	281.4	281.4
20°	268.6	270.7	272.4	277.1	277.1
22.5°	262.2	264.8	267.3	272.0	272.9
25°	255.0	258.0	261.8	266.9	268.2
27.5°	246.5	251.2	255.4	261.8	262.7
30°	238.0	243.5	249.1	255.9	257.1
32.5°	228.7	235.0	241.8	249.9	252.5
35°	219.7	227.0	235.0	244.4	247.4
37.5°	210.0	218.0	228.2	238.4	241.4
40°	200.2	209.5	221.0	232.1	235.9
42.5°	190.8	200.2	213.8	226.1	229.9
45°	180.2	191.7	206.6	219.7	224.0
47.5°	170.0	182.3	199.3	212.9	217.6
50°	159.4	172.6	191.7	206.1	210.8
52.5°	149.2	163.2	183.6	198.5	203.6
55°	138.1	153.4	175.5	190.8	196.4
57.5°	127.5	144.5	166.6	183.2	188.7
60°	116.0	134.3	158.5	174.7	180.6
62.5°	105.8	125.0	149.2	166.6	172.1
65°	94.4	115.2	140.3	157.7	163.2
67.5°	84.2	105.8	131.3	148.8	154.7
70°	73.1	95.2	121.6	139.8	144.9
72.5°	62.9	85.9	112.6	130.5	136.9
75°	52.3	76.1	103.3	121.6	127.1
77.5°	42.1	66.7	94.4	112.6	118.6
80°	31.9	57.8	85.4	103.3	109.2
82.5°	23.4	48.9	76.9	94.8	100.3
85°	15.3	41.7	68.9	86.7	92.7
87.5°	9.4	34.9	62.1	79.5	85.0
90°	4.6	33.5	67.7	84.2	89.5
92.5°	8.9	42.6	104.9	93.2	94.9
95°	15.4	52.8	182.9	115.6	109.1
97.5°	20.8	60.1	264.3	163.2	132.0
100°	29.3	66.2	312.5	260.4	185.3
102.5°	36.8	72.0	311.3	396.6	298.1
105°	43.8	77.4	289.9	504.2	441.3
107.5°	52.0	82.7	269.8	541.0	536.7
110°	59.8	88.4	255.6	531.0	573.7

TEST NUMBER: P998194

CATALOG NUMBER: SA2XXDIP-B290D330UB50-4F0-XX-W2A-D4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	67.3	93.9	245.2	506.1	570.0
115°	75.2	99.2	237.4	475.7	549.8
117.5°	83.0	104.8	231.7	446.8	521.1
120°	90.5	110.3	226.8	420.4	494.0
122.5°	97.7	116.4	222.8	399.4	464.8
125°	103.4	122.2	218.2	380.2	441.0
127.5°	108.6	128.0	214.6	363.0	418.1
130°	113.0	133.7	211.4	346.0	398.7
132.5°	117.1	139.2	208.5	328.5	378.9
135°	120.7	144.0	206.0	311.4	357.8
137.5°	124.5	148.0	203.9	294.0	337.0
140°	128.9	151.4	201.9	278.4	315.5
142.5°	133.4	154.5	201.0	263.7	294.3
145°	137.4	158.0	200.3	251.2	276.8
147.5°	142.2	160.6	199.3	240.4	260.5
150°	147.0	163.4	198.3	232.4	247.1
152.5°	151.8	166.2	196.6	226.2	237.2
155°	156.2	168.7	194.5	220.0	228.7
157.5°	160.0	170.8	192.4	214.2	221.2
160°	163.7	172.8	190.4	208.3	214.0
162.5°	167.5	174.4	188.7	202.8	207.1
165°	170.2	175.4	186.3	197.6	200.7
167.5°	172.6	176.4	184.2	192.8	194.5
170°	175.0	176.9	182.5	188.4	189.0
172.5°	176.4	177.4	180.5	184.4	184.6
175°	177.4	177.6	179.1	181.4	180.8
177.5°	178.1	177.8	177.8	179.1	178.1
180°	177.8	177.8	177.8	177.8	177.8

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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	9.78	10.62	10.80	11.65	13.02	12.86	13.70	13.87	14.72	16.10
	3H	11.24	12.00	12.26	13.04	14.43	15.45	16.20	16.47	17.24	18.63
	4H	11.72	12.44	12.75	13.48	14.88	16.70	17.42	17.73	18.46	19.86
	6H	12.00	12.67	13.04	13.71	15.12	18.00	18.66	19.04	19.70	21.12
	8H	12.06	12.69	13.11	13.75	15.16	18.65	19.29	19.70	20.35	21.76
	12H	12.08	12.68	13.13	13.73	15.17	19.38	19.98	20.43	21.04	22.47
4H	2H	10.83	11.55	11.87	12.59	13.99	13.19	13.91	14.23	14.95	16.35
	3H	12.54	13.15	13.59	14.21	15.63	15.98	16.58	17.02	17.65	19.07
	4H	13.16	13.72	14.21	14.78	16.21	17.39	17.95	18.45	19.01	20.45
	6H	13.57	14.06	14.64	15.14	16.57	18.86	19.35	19.92	20.43	21.86
	8H	13.68	14.14	14.75	15.21	16.66	19.62	20.07	20.68	21.15	22.59
	12H	13.72	14.14	14.81	15.23	16.68	20.44	20.86	21.53	21.95	23.40
8H	4H	13.95	14.40	15.01	15.48	16.93	17.54	17.99	18.60	19.07	20.51
	6H	14.58	14.96	15.67	16.08	17.52	19.16	19.55	20.25	20.66	22.10
	8H	14.80	15.14	15.89	16.24	17.70	20.05	20.39	21.15	21.49	22.95
	12H	14.93	15.23	16.03	16.33	17.83	21.05	21.35	22.14	22.44	23.94
12H	4H	14.15	14.56	15.23	15.65	17.10	17.51	17.92	18.59	19.01	20.46
	6H	14.91	15.25	16.01	16.35	17.81	19.19	19.53	20.28	20.62	22.09
	8H	15.22	15.52	16.31	16.61	18.11	20.12	20.42	21.21	21.51	23.01