

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: P998160

Luminaire Tested: SA2XXDIP-B290D330UB2750-4F0-XX-W2A-F_4000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998160
REPORT IS A COMBINATION OF REPORTS P983900 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-F_4000K
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

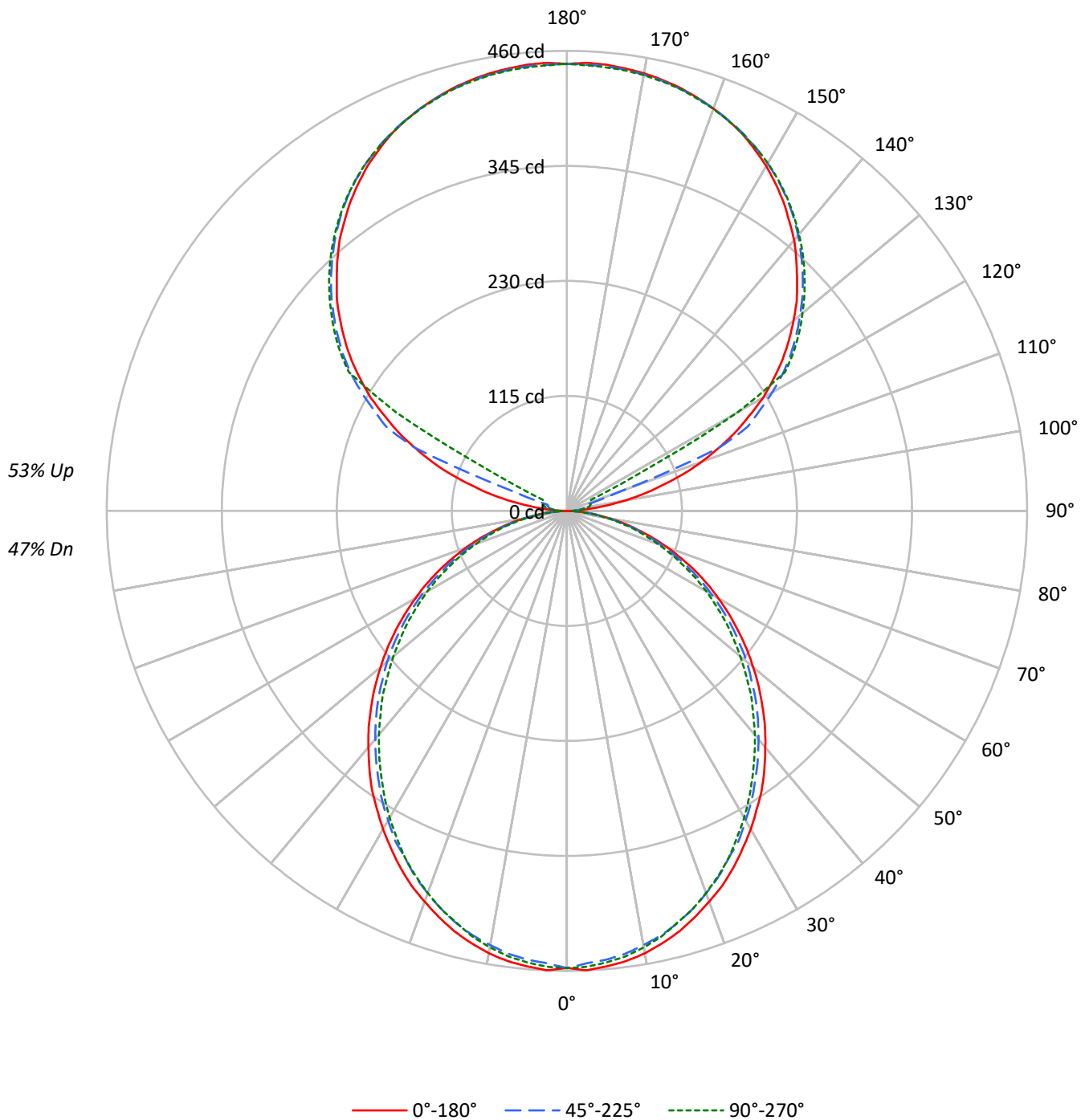
Lumens per Lamp: N/A
Luminaire Lumens: 2474.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53
1	97	93	89	85	89	85	82	79	72	69	67	59	57	56	47	46	45
2	88	81	75	70	81	75	69	65	63	59	56	52	49	47	42	40	38
3	81	71	64	58	74	66	59	54	55	51	47	46	42	39	37	34	32
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	30	28
5	68	56	48	42	62	52	45	39	44	38	34	37	32	29	30	27	24
6	62	50	42	36	57	47	39	34	40	34	30	33	29	26	27	24	21
7	58	45	38	32	53	42	35	30	36	30	26	30	26	23	25	21	19
8	53	41	34	28	49	38	31	27	33	27	23	27	23	20	23	19	17
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	21	18	15
10	46	34	27	23	43	32	26	21	28	22	19	23	19	16	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7236	7236	7236
5°	7247	6897	6849
10°	7189	6583	6453
15°	7083	6266	6036
20°	6941	5921	5641
25°	6799	5561	5247
30°	6622	5223	4834
35°	6453	4866	4428
40°	6246	4515	4044
45°	6039	4166	3667
50°	5813	3811	3278
55°	5574	3431	2907
60°	5307	3019	2523
65°	5016	2603	2118
70°	4643	2144	1711
75°	4128	1654	1321
80°	3513	1123	849
85°	2543	521	362

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 6039 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	1.7
10°-20°	121.1	4.9
20°-30°	177.9	7.2
30°-40°	206.6	8.4
40°-50°	206.4	8.3
50°-60°	179.9	7.3
60°-70°	133.0	5.4
70°-80°	75.3	3.0
80°-90°	20.6	0.8
90°-100°	14.7	0.6
100°-110°	54.9	2.2
110°-120°	145.7	5.9
120°-130°	241.7	9.8
130°-140°	256.7	10.4
140°-150°	238.6	9.6
150°-160°	191.8	7.8
160°-170°	123.6	5.0
170°-180°	42.5	1.7
0°-30°	342.0	13.8
0°-40°	548.6	22.2
0°-60°	934.9	37.8
0°-90°	1163.8	47.0
90°-120°	215.4	8.7
90°-150°	952.3	38.5
90°-180°	1310.0	53.0
0°-180°	2474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	457	455	450	454	453	43
15°	435	432	427	429	426	123
25°	394	390	383	384	383	181
35°	340	335	328	326	324	212
45°	276	273	267	262	260	213
55°	209	207	201	196	194	187
65°	141	138	134	130	128	139
75°	74	73	71	68	69	79
85°	18	18	17	16	15	20
90°	0	4	6	8	9	2
95°	21	10	13	14	14	25
105°	98	108	20	23	25	105
115°	186	191	200	50	26	183
125°	263	267	273	276	276	234
135°	325	330	333	337	336	251
145°	377	377	383	385	383	236
155°	416	413	416	418	416	191
165°	438	436	437	439	437	124
175°	448	446	446	448	445	43
180°	447	447	447	447	447	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.1	457.1	457.1	457.1	457.1
2.5°	459.8	457.6	452.7	457.1	456.2
5°	457.1	455.4	450.5	454.0	453.2
7.5°	454.0	451.4	446.6	450.1	449.2
10°	449.2	446.1	440.9	444.4	443.1
12.5°	442.6	440.0	434.7	436.9	436.0
15°	435.1	432.5	426.8	428.6	426.4
17.5°	425.9	423.3	417.6	419.8	417.6
20°	415.8	413.2	407.0	408.3	406.6
22.5°	405.7	401.7	396.0	396.0	395.1
25°	393.8	390.3	382.8	383.7	382.8
27.5°	380.6	377.6	371.9	370.5	368.3
30°	367.5	363.9	357.3	356.0	354.3
32.5°	353.4	350.8	343.7	341.1	339.3
35°	339.8	335.4	328.3	325.7	323.5
37.5°	324.4	320.4	313.4	310.3	308.1
40°	308.6	305.0	298.0	294.1	292.3
42.5°	293.2	289.7	282.6	278.2	275.6
45°	276.5	273.4	266.8	262.0	260.2
47.5°	260.2	257.1	250.1	245.3	242.6
50°	243.1	240.9	234.7	228.6	226.4
52.5°	226.4	223.3	217.6	212.7	209.7
55°	209.2	206.6	201.3	196.0	193.8
57.5°	192.1	189.9	184.2	178.9	177.1
60°	174.9	173.2	167.0	162.2	160.9
62.5°	158.2	155.2	150.8	146.4	144.6
65°	141.1	138.5	134.1	130.1	127.9
67.5°	123.5	121.3	117.4	114.3	112.5
70°	107.2	105.5	101.5	98.5	96.7
72.5°	90.5	88.8	86.6	83.5	82.2
75°	73.8	73.0	70.8	68.1	69.0
77.5°	58.9	57.1	56.3	54.9	53.6
80°	44.0	43.5	42.6	41.3	40.4
82.5°	29.9	29.9	29.4	27.7	27.7
85°	18.0	17.6	17.1	15.8	15.4
87.5°	7.9	7.0	6.2	4.8	4.4
90°	0.3	3.9	6.5	8.1	8.7
92.5°	8.1	6.8	7.8	8.4	8.7
95°	21.0	10.3	12.6	14.2	13.9
97.5°	37.8	11.3	16.5	17.5	17.8
100°	57.2	12.9	18.4	21.0	21.7
102.5°	78.6	77.9	19.1	22.6	23.6
105°	98.3	108.0	19.7	23.3	24.6
107.5°	121.3	129.4	20.4	23.9	25.2
110°	143.3	150.1	56.6	24.3	25.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	164.0	169.8	164.3	24.9	25.9
115°	185.9	191.4	199.5	49.8	26.5
117.5°	205.0	211.5	217.0	170.7	86.0
120°	226.4	231.2	237.0	240.9	197.3
122.5°	244.5	249.7	256.1	258.1	258.4
125°	262.9	267.1	273.3	275.5	276.5
127.5°	279.7	284.3	289.1	292.3	292.7
130°	295.6	300.7	304.3	307.9	307.5
132.5°	311.7	315.9	319.5	322.4	322.1
135°	325.3	330.5	333.4	336.6	336.0
137.5°	339.6	343.4	346.7	349.9	348.9
140°	353.5	356.0	359.6	362.5	360.9
142.5°	365.1	367.4	371.6	374.2	372.5
145°	377.4	377.1	382.6	384.8	383.2
147.5°	388.1	387.1	392.6	394.2	392.9
150°	398.4	396.1	401.3	403.3	401.6
152.5°	407.1	404.6	409.4	411.3	409.1
155°	415.6	412.6	416.5	418.5	415.9
157.5°	422.3	419.8	422.7	424.9	422.3
160°	428.2	426.2	428.2	430.1	427.8
162.5°	433.3	431.4	433.0	435.3	432.4
165°	437.9	435.9	436.9	439.2	436.9
167.5°	441.4	439.5	440.5	442.7	439.8
170°	444.3	442.4	443.0	445.3	442.4
172.5°	446.3	444.3	445.0	447.2	444.3
175°	447.9	445.6	446.3	448.5	445.3
177.5°	448.5	446.3	446.6	448.9	446.0
180°	446.9	446.9	446.9	446.9	446.9

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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	11.83	12.67	12.81	13.66	14.98	12.61	13.45	13.60	14.44	15.76
	3H	13.17	13.92	14.16	14.92	16.25	14.24	14.99	15.23	15.99	17.33
	4H	13.57	14.28	14.58	15.29	16.63	14.83	15.54	15.83	16.55	17.89
	6H	13.79	14.44	14.81	15.45	16.81	15.23	15.88	16.25	16.90	18.25
	8H	13.82	14.44	14.84	15.47	16.82	15.34	15.96	16.36	16.99	18.34
	12H	13.81	14.40	14.84	15.42	16.80	15.38	15.97	16.41	17.00	18.37
4H	2H	12.30	13.01	13.31	14.02	15.36	12.94	13.65	13.95	14.66	16.00
	3H	13.81	14.40	14.83	15.44	16.80	14.72	15.31	15.74	16.35	17.70
	4H	14.32	14.86	15.35	15.89	17.27	15.40	15.94	16.43	16.97	18.35
	6H	14.62	15.09	15.66	16.14	17.51	15.89	16.36	16.93	17.41	18.79
	8H	14.68	15.11	15.72	16.16	17.55	16.04	16.47	17.08	17.52	18.91
	12H	14.67	15.07	15.73	16.13	17.52	16.10	16.49	17.15	17.55	18.94
8H	4H	14.49	14.93	15.53	15.97	17.36	15.48	15.92	16.52	16.96	18.35
	6H	14.87	15.23	15.94	16.32	17.71	16.05	16.41	17.11	17.50	18.88
	8H	14.98	15.29	16.05	16.36	17.77	16.24	16.56	17.31	17.63	19.03
	12H	15.01	15.29	16.08	16.35	17.80	16.34	16.61	17.41	17.68	19.13
12H	4H	14.47	14.87	15.53	15.93	17.32	15.45	15.84	16.50	16.90	18.29
	6H	14.89	15.21	15.96	16.28	17.69	16.04	16.36	17.11	17.43	18.84
	8H	15.00	15.28	16.08	16.35	17.79	16.24	16.51	17.31	17.58	19.03