

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: P998161

Luminaire Tested: SA2XXDIP-B290D330UB2750-4F0-XX-W2A-F_5000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998161
REPORT IS A COMBINATION OF REPORTS P983901 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_5000K
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

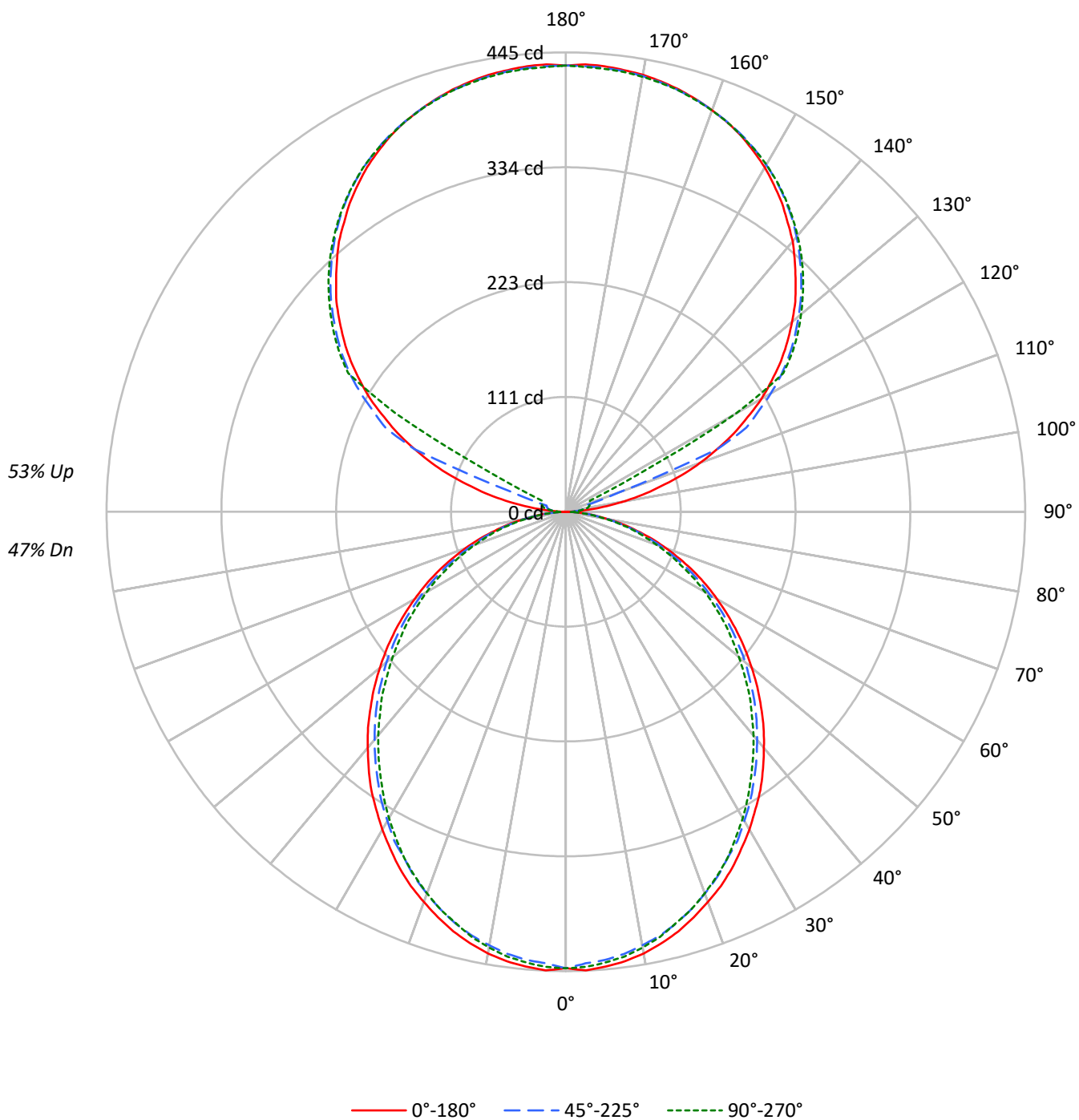
Lumens per Lamp: N/A
Luminaire Lumens: 2393.0 lumens
Efficiency: N/A
Efficacy: 107.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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°	7000	7000	7000
5°	7011	6672	6625
10°	6953	6368	6242
15°	6852	6062	5838
20°	6714	5728	5457
25°	6578	5380	5075
30°	6405	5054	4676
35°	6243	4708	4283
40°	6041	4368	3911
45°	5840	4030	3548
50°	5622	3686	3170
55°	5393	3318	2812
60°	5134	2922	2440
65°	4852	2517	2049
70°	4491	2074	1654
75°	3994	1600	1279
80°	3393	1086	822
85°	2458	506	350

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5840 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	1.7
10°-20°	117.1	4.9
20°-30°	172.1	7.2
30°-40°	199.9	8.4
40°-50°	199.6	8.3
50°-60°	174.1	7.3
60°-70°	128.7	5.4
70°-80°	72.8	3.0
80°-90°	20.0	0.8
90°-100°	14.3	0.6
100°-110°	53.1	2.2
110°-120°	140.9	5.9
120°-130°	233.7	9.8
130°-140°	248.3	10.4
140°-150°	230.7	9.6
150°-160°	185.5	7.8
160°-170°	119.5	5.0
170°-180°	41.1	1.7
0°-30°	330.8	13.8
0°-40°	530.7	22.2
0°-60°	904.3	37.8
0°-90°	1125.8	47.0
90°-120°	208.3	8.7
90°-150°	921.1	38.5
90°-180°	1267.0	52.9
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	442	440	436	439	438	42
15°	421	418	413	415	412	119
25°	381	378	370	371	370	175
35°	329	324	318	315	313	205
45°	267	264	258	253	252	206
55°	202	200	195	190	188	181
65°	136	134	130	126	124	135
75°	71	71	68	66	67	76
85°	17	17	17	15	15	19
90°	0	4	6	8	8	2
95°	20	10	12	14	13	24
105°	95	104	19	22	24	102
115°	180	185	193	48	26	177
125°	254	258	264	266	267	227
135°	315	320	322	326	325	243
145°	365	365	370	372	371	228
155°	402	399	403	405	402	185
165°	424	422	423	425	423	120
175°	433	431	432	434	431	41
180°	432	432	432	432	432	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	442.2	442.2	442.2	442.2	442.2
2.5°	444.7	442.6	437.9	442.2	441.3
5°	442.2	440.5	435.8	439.2	438.4
7.5°	439.2	436.7	432.0	435.4	434.5
10°	434.5	431.6	426.5	429.9	428.6
12.5°	428.2	425.6	420.5	422.6	421.8
15°	420.9	418.4	412.9	414.6	412.4
17.5°	412.0	409.5	403.9	406.0	403.9
20°	402.2	399.7	393.7	395.0	393.3
22.5°	392.4	388.6	383.1	383.1	382.2
25°	381.0	377.6	370.3	371.2	370.3
27.5°	368.2	365.2	359.7	358.4	356.3
30°	355.5	352.1	345.7	344.4	342.7
32.5°	341.8	339.3	332.5	329.9	328.2
35°	328.7	324.4	317.6	315.1	312.9
37.5°	313.8	310.0	303.2	300.2	298.1
40°	298.5	295.1	288.3	284.4	282.7
42.5°	283.6	280.2	273.4	269.1	266.6
45°	267.4	264.5	258.1	253.4	251.7
47.5°	251.7	248.7	241.9	237.3	234.7
50°	235.1	233.0	227.0	221.1	219.0
52.5°	219.0	216.0	210.5	205.8	202.8
55°	202.4	199.8	194.7	189.6	187.5
57.5°	185.8	183.7	178.2	173.0	171.3
60°	169.2	167.5	161.6	156.9	155.6
62.5°	153.1	150.1	145.8	141.6	139.9
65°	136.5	133.9	129.7	125.9	123.7
67.5°	119.5	117.4	113.5	110.5	108.8
70°	103.7	102.0	98.2	95.2	93.5
72.5°	87.6	85.9	83.8	80.8	79.5
75°	71.4	70.6	68.5	65.9	66.8
77.5°	57.0	55.3	54.4	53.1	51.9
80°	42.5	42.1	41.2	40.0	39.1
82.5°	28.9	28.9	28.5	26.8	26.8
85°	17.4	17.0	16.6	15.3	14.9
87.5°	7.7	6.8	6.0	4.7	4.3
90°	0.3	3.8	6.3	7.8	8.4
92.5°	7.8	6.6	7.5	8.1	8.4
95°	20.3	10.0	12.2	13.8	13.4
97.5°	36.6	10.9	16.0	16.9	17.2
100°	55.4	12.5	17.8	20.3	21.0
102.5°	76.0	75.4	18.5	21.9	22.8
105°	95.1	104.5	19.1	22.5	23.8
107.5°	117.3	125.1	19.7	23.1	24.4
110°	138.6	145.1	54.7	23.5	24.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	158.6	164.2	158.9	24.1	25.0
115°	179.8	185.2	193.0	48.2	25.6
117.5°	198.3	204.6	209.9	165.1	83.2
120°	218.9	223.6	229.3	233.0	190.8
122.5°	236.5	241.5	247.7	249.6	249.9
125°	254.3	258.4	264.3	266.5	267.4
127.5°	270.6	274.9	279.6	282.8	283.1
130°	285.9	290.9	294.3	297.8	297.5
132.5°	301.5	305.6	309.0	311.8	311.5
135°	314.7	319.7	322.5	325.6	325.0
137.5°	328.4	332.2	335.3	338.4	337.5
140°	341.9	344.4	347.8	350.6	349.1
142.5°	353.1	355.3	359.4	361.9	360.3
145°	365.0	364.7	370.0	372.2	370.6
147.5°	375.3	374.4	379.7	381.3	380.0
150°	385.3	383.2	388.2	390.0	388.5
152.5°	393.8	391.3	396.0	397.9	395.7
155°	401.9	399.1	402.9	404.7	402.2
157.5°	408.5	406.0	408.8	411.0	408.5
160°	414.1	412.2	414.1	416.0	413.8
162.5°	419.1	417.2	418.8	421.0	418.2
165°	423.5	421.6	422.6	424.8	422.6
167.5°	426.9	425.1	426.0	428.2	425.4
170°	429.8	427.9	428.5	430.7	427.9
172.5°	431.6	429.8	430.4	432.6	429.8
175°	433.2	431.0	431.6	433.8	430.7
177.5°	433.8	431.6	431.9	434.1	431.3
180°	432.3	432.3	432.3	432.3	432.3

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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	11.72	12.55	12.70	13.55	14.86	12.50	13.33	13.48	14.33	15.64
	3H	13.05	13.80	14.05	14.81	16.14	14.12	14.87	15.11	15.87	17.21
	4H	13.46	14.17	14.46	15.17	16.52	14.71	15.42	15.72	16.43	17.77
	6H	13.67	14.33	14.69	15.34	16.69	15.11	15.77	16.13	16.78	18.13
	8H	13.70	14.33	14.73	15.35	16.71	15.22	15.84	16.24	16.87	18.22
	12H	13.69	14.29	14.72	15.31	16.68	15.27	15.86	16.29	16.88	18.26
4H	2H	12.18	12.89	13.20	13.90	15.24	12.82	13.53	13.84	14.54	15.88
	3H	13.70	14.29	14.72	15.33	16.68	14.60	15.19	15.62	16.23	17.59
	4H	14.20	14.74	15.23	15.77	17.15	15.28	15.82	16.31	16.85	18.23
	6H	14.50	14.97	15.54	16.02	17.40	15.78	16.24	16.82	17.30	18.67
	8H	14.56	15.00	15.60	16.04	17.43	15.92	16.36	16.96	17.40	18.79
	12H	14.56	14.95	15.62	16.01	17.41	15.98	16.37	17.04	17.43	18.83
8H	4H	14.38	14.81	15.42	15.86	17.25	15.37	15.80	16.41	16.85	18.24
	6H	14.76	15.12	15.82	16.21	17.59	15.93	16.29	17.00	17.38	18.77
	8H	14.86	15.18	15.93	16.25	17.65	16.12	16.44	17.19	17.51	18.92
	12H	14.89	15.17	15.97	16.24	17.68	16.22	16.50	17.30	17.57	19.01
12H	4H	14.36	14.75	15.42	15.81	17.21	15.33	15.72	16.39	16.78	18.18
	6H	14.78	15.09	15.85	16.16	17.57	15.93	16.24	17.00	17.31	18.72
	8H	14.89	15.17	15.96	16.23	17.68	16.12	16.40	17.20	17.47	18.91