

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: P998184

Luminaire Tested: SA2XXDIP-B290D330UB40-4F0-XX-W2A-D1

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998184
REPORT IS A COMBINATION OF REPORTS P983924 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB40-4F0-XX-W2A-D1
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

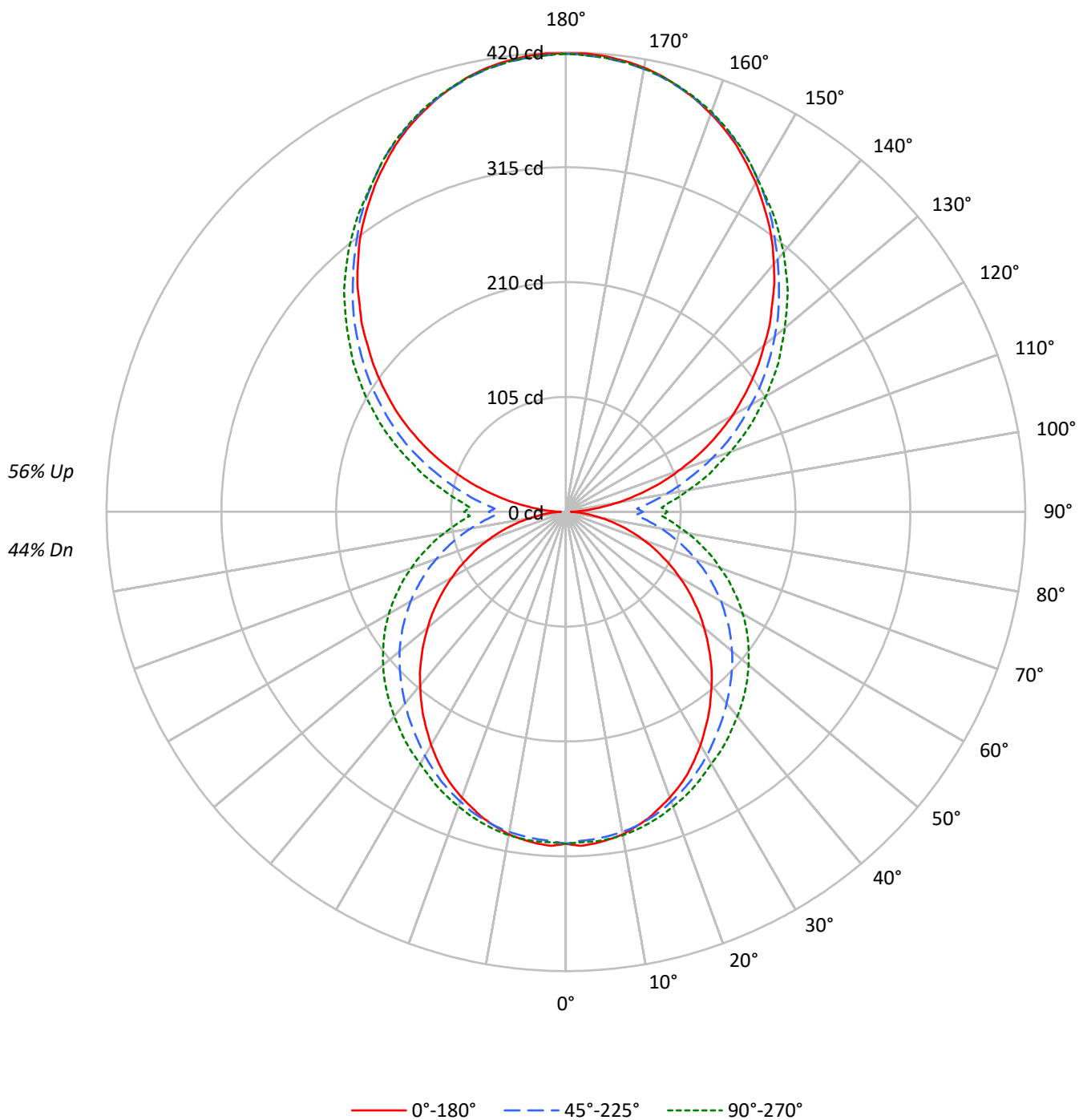
Lumens per Lamp: N/A
Luminaire Lumens: 2330.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51
1	95	90	86	82	87	83	79	75	68	65	63	55	53	51	43	41	40
2	86	78	71	66	78	71	66	61	59	55	51	47	44	42	37	35	33
3	78	68	60	54	71	62	56	50	52	46	42	42	38	35	32	30	27
4	71	60	52	45	65	55	48	42	46	40	36	37	33	29	29	26	23
5	65	53	45	39	59	49	41	36	41	35	30	33	29	25	26	22	20
6	60	48	39	33	55	44	36	31	36	31	26	30	25	22	23	20	17
7	55	43	35	29	50	39	32	27	33	27	23	27	22	19	21	18	15
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	14
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	18	15	12
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4804	4804	4804
5°	4826	4599	4573
10°	4793	4439	4375
15°	4726	4275	4172
20°	4641	4101	3979
25°	4556	3936	3803
30°	4438	3767	3631
35°	4319	3605	3504
40°	4194	3465	3377
45°	4073	3338	3267
50°	3943	3221	3159
55°	3808	3097	3048
60°	3644	2967	2931
65°	3470	2816	2797
70°	3278	2657	2654
75°	3026	2497	2517
80°	2635	2330	2376
85°	2232	2174	2255

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4073 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.8	1.2
10°-20°	82.5	3.5
20°-30°	125.0	5.4
30°-40°	152.2	6.5
40°-50°	163.8	7.0
50°-60°	159.1	6.8
60°-70°	138.9	6.0
70°-80°	106.9	4.6
80°-90°	72.8	3.1
90°-100°	75.3	3.2
100°-110°	118.4	5.1
110°-120°	164.7	7.1
120°-130°	198.6	8.5
130°-140°	213.6	9.2
140°-150°	204.9	8.8
150°-160°	171.1	7.3
160°-170°	113.5	4.9
170°-180°	39.7	1.7
0°-30°	236.3	10.1
0°-40°	388.5	16.7
0°-60°	711.5	30.5
0°-90°	1030.1	44.2
90°-120°	358.5	15.4
90°-150°	975.6	41.9
90°-180°	1300.0	55.8
0°-180°	2330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	304	304	304	304	304	
5°	304	303	300	303	303	29
15°	290	291	291	295	295	82
25°	264	267	271	276	278	121
35°	227	235	243	253	256	142
45°	186	198	214	227	232	144
55°	143	159	182	198	203	128
65°	98	119	145	163	169	97
75°	54	79	107	126	132	57
85°	16	43	71	90	96	17
90°	5	34	70	87	93	4
95°	22	46	73	90	94	23
105°	78	92	116	132	137	83
115°	143	150	169	182	186	141
125°	207	210	223	234	237	185
135°	266	270	276	284	287	206
145°	323	326	328	331	331	202
155°	369	370	371	373	372	170
165°	402	402	402	404	402	113
175°	418	417	416	419	417	40
180°	419	419	419	419	419	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	303.5	303.5	303.5	303.5	303.5
2.5°	305.7	304.4	301.3	303.5	302.6
5°	304.4	303.0	300.4	303.0	302.6
7.5°	302.2	301.3	299.1	302.2	301.7
10°	299.5	298.6	297.3	300.8	300.4
12.5°	295.1	295.6	294.7	298.2	297.8
15°	290.3	291.2	291.2	295.1	294.7
17.5°	284.1	285.9	287.2	291.2	291.2
20°	278.0	280.2	281.9	286.8	286.8
22.5°	271.4	274.0	276.7	281.5	282.4
25°	263.9	267.0	270.9	276.2	277.5
27.5°	255.1	259.9	264.3	270.9	271.8
30°	246.3	252.0	257.7	264.8	266.1
32.5°	236.6	243.2	250.3	258.6	261.3
35°	227.4	234.9	243.2	252.9	256.0
37.5°	217.3	225.6	236.2	246.7	249.8
40°	207.2	216.8	228.7	240.2	244.1
42.5°	197.5	207.2	221.2	234.0	238.0
45°	186.5	198.4	213.8	227.4	231.8
47.5°	175.9	188.7	206.3	220.4	225.2
50°	164.9	178.6	198.4	213.3	218.2
52.5°	154.4	168.9	190.0	205.4	210.7
55°	142.9	158.8	181.7	197.5	203.2
57.5°	132.0	149.5	172.4	189.6	195.3
60°	120.1	139.0	164.1	180.8	186.9
62.5°	109.5	129.3	154.4	172.4	178.1
65°	97.6	119.2	145.1	163.2	168.9
67.5°	87.1	109.5	135.9	153.9	160.1
70°	75.7	98.5	125.8	144.7	150.0
72.5°	65.1	88.8	116.6	135.0	141.6
75°	54.1	78.7	106.9	125.8	131.5
77.5°	43.5	69.1	97.6	116.6	122.7
80°	33.0	59.8	88.4	106.9	113.0
82.5°	24.2	50.6	79.6	98.1	103.8
85°	15.8	43.1	71.3	89.7	95.9
87.5°	9.7	36.1	64.2	82.2	88.0
90°	4.8	34.5	70.5	87.4	92.9
92.5°	11.8	37.9	65.1	82.6	87.8
95°	21.9	46.1	73.2	89.9	94.5
97.5°	33.8	55.9	82.8	99.1	104.4
100°	48.0	67.1	92.8	109.1	113.5
102.5°	62.3	79.0	104.2	120.3	124.9
105°	78.2	92.0	115.5	131.7	136.6
107.5°	94.4	106.4	128.3	143.7	146.7
110°	109.6	120.5	142.0	156.1	159.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.5	135.7	155.5	168.6	172.6
115°	143.2	150.1	169.2	182.0	185.8
117.5°	159.3	165.6	182.3	194.5	197.8
120°	175.9	180.5	195.3	207.6	211.3
122.5°	191.1	195.1	209.5	220.4	223.7
125°	206.6	209.8	222.8	233.5	237.2
127.5°	222.1	225.5	236.0	245.6	248.5
130°	236.6	240.7	249.3	259.1	261.3
132.5°	252.9	255.9	262.9	271.3	273.7
135°	266.5	270.4	275.5	284.4	286.9
137.5°	282.1	285.2	288.1	296.2	297.9
140°	295.8	298.6	301.3	308.3	309.6
142.5°	310.0	312.8	313.8	319.5	320.3
145°	323.0	325.5	327.6	330.6	331.3
147.5°	335.0	338.2	339.6	340.7	340.7
150°	347.4	349.5	350.9	352.0	350.9
152.5°	358.3	360.5	362.2	363.6	362.2
155°	369.3	370.4	371.4	373.2	372.1
157.5°	378.8	379.5	380.3	382.7	381.0
160°	387.3	388.0	388.4	390.5	389.1
162.5°	395.1	395.1	395.4	397.9	396.2
165°	401.8	401.5	401.5	403.9	402.2
167.5°	407.8	406.8	406.8	409.2	407.5
170°	412.4	411.4	411.0	413.5	411.4
172.5°	415.6	414.5	414.2	416.7	414.5
175°	418.1	417.0	416.3	418.8	416.7
177.5°	419.5	418.4	417.7	419.8	417.7
180°	418.8	418.8	418.8	418.8	418.8

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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	10.11	10.96	11.10	11.98	13.32	13.19	14.04	14.18	15.05	16.40
	3H	11.57	12.34	12.57	13.36	14.73	15.77	16.55	16.78	17.57	18.93
	4H	12.04	12.78	13.06	13.80	15.18	17.03	17.76	18.04	18.79	20.16
	6H	12.33	13.01	13.35	14.04	15.42	18.32	19.00	19.35	20.03	21.42
	8H	12.39	13.04	13.42	14.08	15.46	18.98	19.63	20.01	20.68	22.06
	12H	12.40	13.02	13.44	14.06	15.47	19.71	20.32	20.74	21.36	22.77
4H	2H	11.16	11.89	12.18	12.92	14.29	13.51	14.25	14.54	15.27	16.65
	3H	12.86	13.49	13.90	14.54	15.93	16.30	16.93	17.34	17.98	19.37
	4H	13.49	14.06	14.52	15.10	16.51	17.72	18.29	18.76	19.34	20.75
	6H	13.90	14.40	14.95	15.47	16.87	19.19	19.69	20.24	20.75	22.16
	8H	14.01	14.48	15.06	15.54	16.96	19.94	20.41	20.99	21.47	22.89
	12H	14.05	14.48	15.12	15.55	16.98	20.77	21.20	21.84	22.27	23.70
8H	4H	14.28	14.74	15.33	15.80	17.23	17.86	18.33	18.91	19.39	20.81
	6H	14.91	15.30	15.98	16.40	17.82	19.49	19.89	20.56	20.99	22.40
	8H	15.13	15.48	16.21	16.56	18.00	20.38	20.73	21.46	21.81	23.25
	12H	15.26	15.57	16.35	16.65	18.13	21.38	21.68	22.46	22.77	24.24
12H	4H	14.47	14.90	15.54	15.97	17.40	17.84	18.26	18.91	19.34	20.76
	6H	15.24	15.59	16.32	16.68	18.11	19.52	19.87	20.60	20.95	22.39
	8H	15.55	15.86	16.63	16.94	18.41	20.45	20.75	21.53	21.84	23.31