

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: P998170

Luminaire Tested: SA2XXDIP-B290D330UB30-4F0-XX-W2A-F4

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998170
REPORT IS A COMBINATION OF REPORTS P983910 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB30-4F0-XX-W2A-F4
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

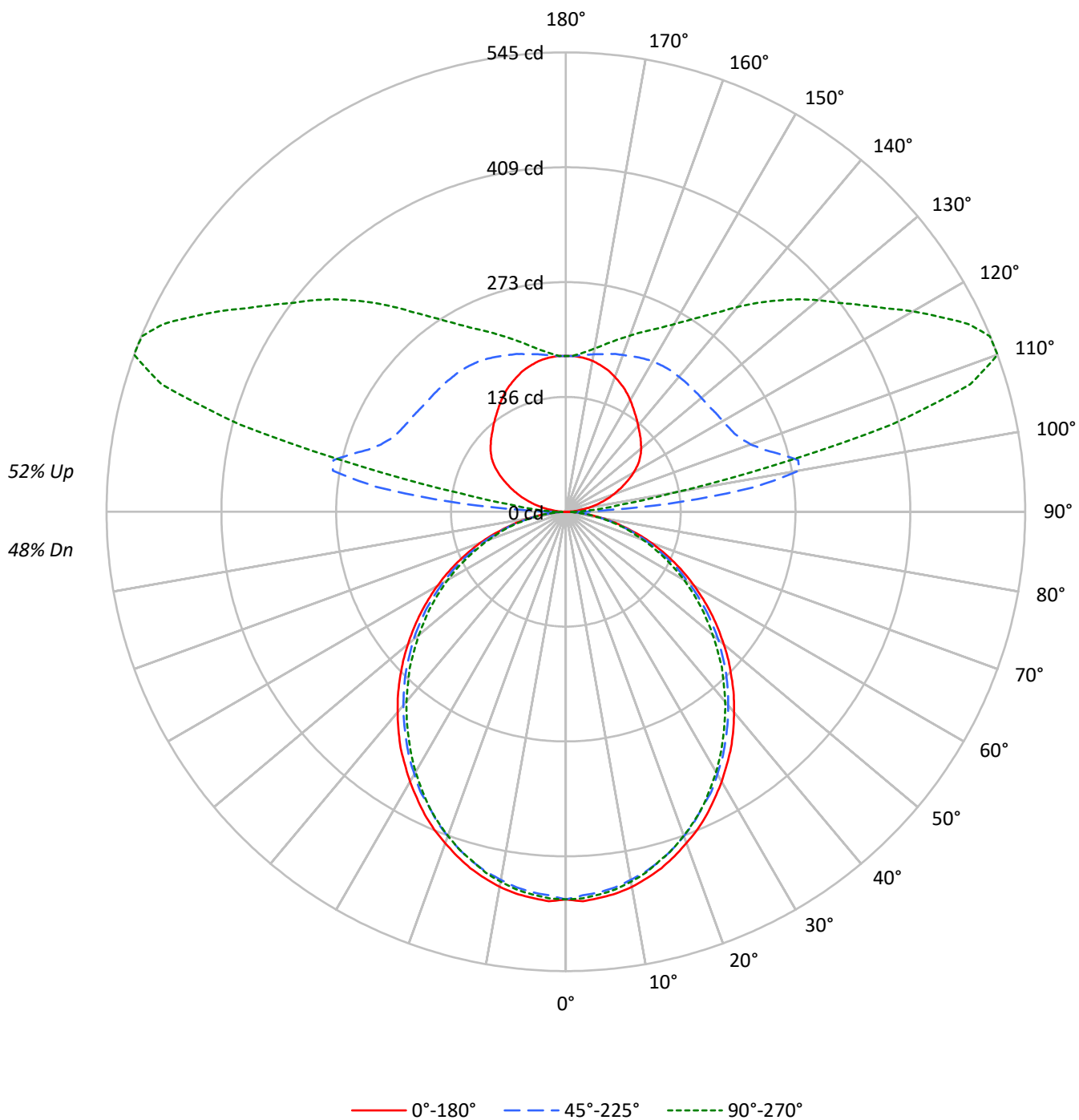
Lumens per Lamp: N/A
Luminaire Lumens: 2459.5 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54
1	97	93	89	86	89	86	82	79	72	69	67	59	58	56	48	47	46
2	89	81	75	70	81	75	70	65	63	59	56	52	49	47	42	40	38
3	81	71	64	58	74	66	59	54	56	51	47	46	43	40	37	35	33
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	40	44	39	34	37	33	29	30	27	25
6	62	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22
7	58	46	38	32	53	42	35	30	36	30	26	30	26	23	25	22	19
8	54	41	34	28	49	38	31	27	33	27	23	28	23	20	23	20	17
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	21	18	16
10	47	35	27	23	43	32	26	21	28	23	19	24	19	17	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7280	7280	7280
5°	7292	6938	6890
10°	7232	6622	6491
15°	7127	6304	6072
20°	6983	5958	5675
25°	6840	5595	5278
30°	6661	5255	4863
35°	6491	4896	4455
40°	6282	4542	4069
45°	6074	4191	3690
50°	5847	3833	3296
55°	5609	3451	2925
60°	5341	3037	2537
65°	5044	2618	2132
70°	4673	2156	1721
75°	4156	1663	1328
80°	3529	1131	856
85°	2557	524	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6074 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	1.8
10°-20°	121.8	5.0
20°-30°	179.0	7.3
30°-40°	207.9	8.5
40°-50°	207.6	8.4
50°-60°	181.0	7.4
60°-70°	133.8	5.4
70°-80°	75.7	3.1
80°-90°	21.2	0.9
90°-100°	74.9	3.0
100°-110°	253.2	10.3
110°-120°	266.2	10.8
120°-130°	218.9	8.9
130°-140°	175.9	7.2
140°-150°	132.9	5.4
150°-160°	93.4	3.8
160°-170°	55.0	2.2
170°-180°	17.9	0.7
0°-30°	344.0	14.0
0°-40°	551.9	22.4
0°-60°	940.5	38.2
0°-90°	1171.2	47.6
90°-120°	594.3	24.2
90°-150°	1122.0	45.6
90°-180°	1288.0	52.4
0°-180°	2459.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	460	458	453	457	456	44
15°	438	435	429	431	429	123
25°	396	393	385	386	385	182
35°	342	337	330	328	326	213
45°	278	275	268	264	262	215
55°	210	208	202	197	195	188
65°	142	139	135	131	129	140
75°	74	73	71	68	69	79
85°	18	18	17	16	16	20
90°	0	5	12	12	12	2
95°	12	31	139	53	40	13
105°	43	65	263	471	400	46
115°	76	96	220	455	527	76
125°	107	126	212	368	428	95
135°	125	149	209	310	354	97
145°	143	164	208	259	283	90
155°	162	175	202	229	238	75
165°	177	182	194	205	209	50
175°	184	185	186	188	188	18
180°	185	185	185	185	185	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	459.9	459.9	459.9	459.9	459.9
2.5°	462.5	460.3	455.5	459.9	459.0
5°	459.9	458.1	453.2	456.8	455.9
7.5°	456.8	454.1	449.3	452.8	451.9
10°	451.9	448.8	443.5	447.1	445.7
12.5°	445.3	442.6	437.3	439.5	438.7
15°	437.8	435.1	429.4	431.1	428.9
17.5°	428.5	425.8	420.1	422.3	420.1
20°	418.3	415.7	409.5	410.8	409.0
22.5°	408.1	404.2	398.4	398.4	397.5
25°	396.2	392.7	385.1	386.0	385.1
27.5°	382.9	379.8	374.1	372.8	370.6
30°	369.7	366.1	359.5	358.2	356.4
32.5°	355.5	352.9	345.8	343.1	341.4
35°	341.8	337.4	330.3	327.7	325.5
37.5°	326.3	322.4	315.3	312.2	310.0
40°	310.4	306.9	299.8	295.8	294.1
42.5°	294.9	291.4	284.3	279.9	277.3
45°	278.1	275.0	268.4	263.5	261.8
47.5°	261.8	258.7	251.6	246.7	244.1
50°	244.5	242.3	236.1	229.9	227.7
52.5°	227.7	224.6	218.9	214.0	210.9
55°	210.5	207.8	202.5	197.2	195.0
57.5°	193.2	191.0	185.3	180.0	178.2
60°	176.0	174.2	168.0	163.2	161.8
62.5°	159.2	156.1	151.7	147.2	145.5
65°	141.9	139.3	134.9	130.9	128.7
67.5°	124.3	122.0	118.1	115.0	113.2
70°	107.9	106.1	102.1	99.1	97.3
72.5°	91.1	89.3	87.1	84.0	82.7
75°	74.3	73.4	71.2	68.5	69.4
77.5°	59.3	57.5	56.6	55.3	53.9
80°	44.2	43.8	42.9	41.6	40.7
82.5°	30.1	30.1	29.6	27.9	27.9
85°	18.1	17.7	17.2	15.9	15.5
87.5°	8.0	7.1	6.2	4.9	4.4
90°	0.4	4.8	12.1	11.6	11.7
92.5°	5.3	16.8	54.7	25.2	21.7
95°	12.4	30.6	139.3	52.6	40.5
97.5°	18.5	40.3	227.1	105.6	67.9
100°	27.4	49.4	280.7	210.2	127.2
102.5°	35.5	57.6	282.5	355.3	248.0
105°	43.4	65.4	263.3	470.6	400.5
107.5°	51.9	73.2	245.5	512.4	503.2
110°	60.4	81.2	233.5	505.6	545.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	68.2	88.8	225.6	482.8	544.4
115°	76.4	96.5	220.3	454.7	527.0
117.5°	84.9	104.1	217.5	427.8	500.7
120°	92.7	111.6	215.0	403.8	475.5
122.5°	100.2	119.2	213.6	385.2	449.2
125°	106.6	126.2	211.8	368.3	427.5
127.5°	111.9	132.8	210.7	354.0	407.2
130°	116.6	138.6	210.0	339.4	390.5
132.5°	120.8	144.2	209.7	324.2	373.1
135°	125.1	149.2	209.3	309.6	354.3
137.5°	129.0	153.5	209.3	294.6	336.2
140°	133.6	157.4	208.9	281.5	317.3
142.5°	138.2	160.6	208.9	268.8	298.5
145°	142.8	164.2	208.2	258.6	282.9
147.5°	147.8	167.0	207.2	249.4	269.0
150°	152.8	169.9	206.1	241.6	256.9
152.5°	157.8	172.7	204.3	235.0	246.6
155°	162.4	175.4	202.2	228.6	237.7
157.5°	166.3	177.5	200.1	222.6	229.9
160°	170.2	179.6	197.9	216.6	222.4
162.5°	174.1	181.2	196.2	210.9	215.3
165°	177.0	182.3	193.7	205.4	208.6
167.5°	179.4	183.4	191.5	200.4	202.2
170°	181.9	183.9	189.8	195.8	196.5
172.5°	183.4	184.4	187.6	191.7	191.9
175°	184.4	184.6	186.2	188.5	188.0
177.5°	185.1	184.8	184.8	186.2	185.1
180°	184.8	184.8	184.8	184.8	184.8

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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	11.91	12.75	12.88	13.74	15.04	12.69	13.53	13.67	14.52	15.83
	3H	13.24	14.00	14.23	15.00	16.32	14.31	15.07	15.30	16.07	17.39
	4H	13.65	14.36	14.65	15.36	16.70	14.90	15.62	15.91	16.62	17.96
	6H	13.86	14.52	14.88	15.53	16.88	15.31	15.96	16.32	16.97	18.32
	8H	13.89	14.52	14.91	15.54	16.89	15.42	16.04	16.43	17.07	18.41
	12H	13.89	14.48	14.91	15.50	16.87	15.46	16.06	16.48	17.07	18.44
4H	2H	12.37	13.09	13.38	14.09	15.42	13.02	13.73	14.03	14.74	16.07
	3H	13.89	14.48	14.90	15.52	16.86	14.80	15.39	15.81	16.42	17.77
	4H	14.39	14.94	15.42	15.96	17.33	15.48	16.02	16.50	17.05	18.42
	6H	14.70	15.16	15.73	16.21	17.58	15.97	16.44	17.01	17.49	18.86
	8H	14.75	15.19	15.79	16.23	17.61	16.11	16.55	17.15	17.59	18.97
	12H	14.75	15.15	15.81	16.20	17.59	16.17	16.57	17.23	17.63	19.01
8H	4H	14.57	15.01	15.60	16.05	17.43	15.56	16.00	16.60	17.04	18.42
	6H	14.95	15.31	16.01	16.40	17.78	16.13	16.49	17.19	17.57	18.95
	8H	15.05	15.37	16.12	16.44	17.84	16.32	16.64	17.38	17.70	19.10
	12H	15.08	15.36	16.15	16.43	17.87	16.42	16.70	17.49	17.76	19.20
12H	4H	14.55	14.94	15.60	16.00	17.39	15.52	15.92	16.58	16.97	18.36
	6H	14.97	15.29	16.04	16.35	17.75	16.12	16.44	17.19	17.51	18.90
	8H	15.08	15.36	16.15	16.42	17.86	16.32	16.60	17.39	17.66	19.10