

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: P998096

Luminaire Tested: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_3000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998096
REPORT IS A COMBINATION OF REPORTS P983833 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_3000K
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

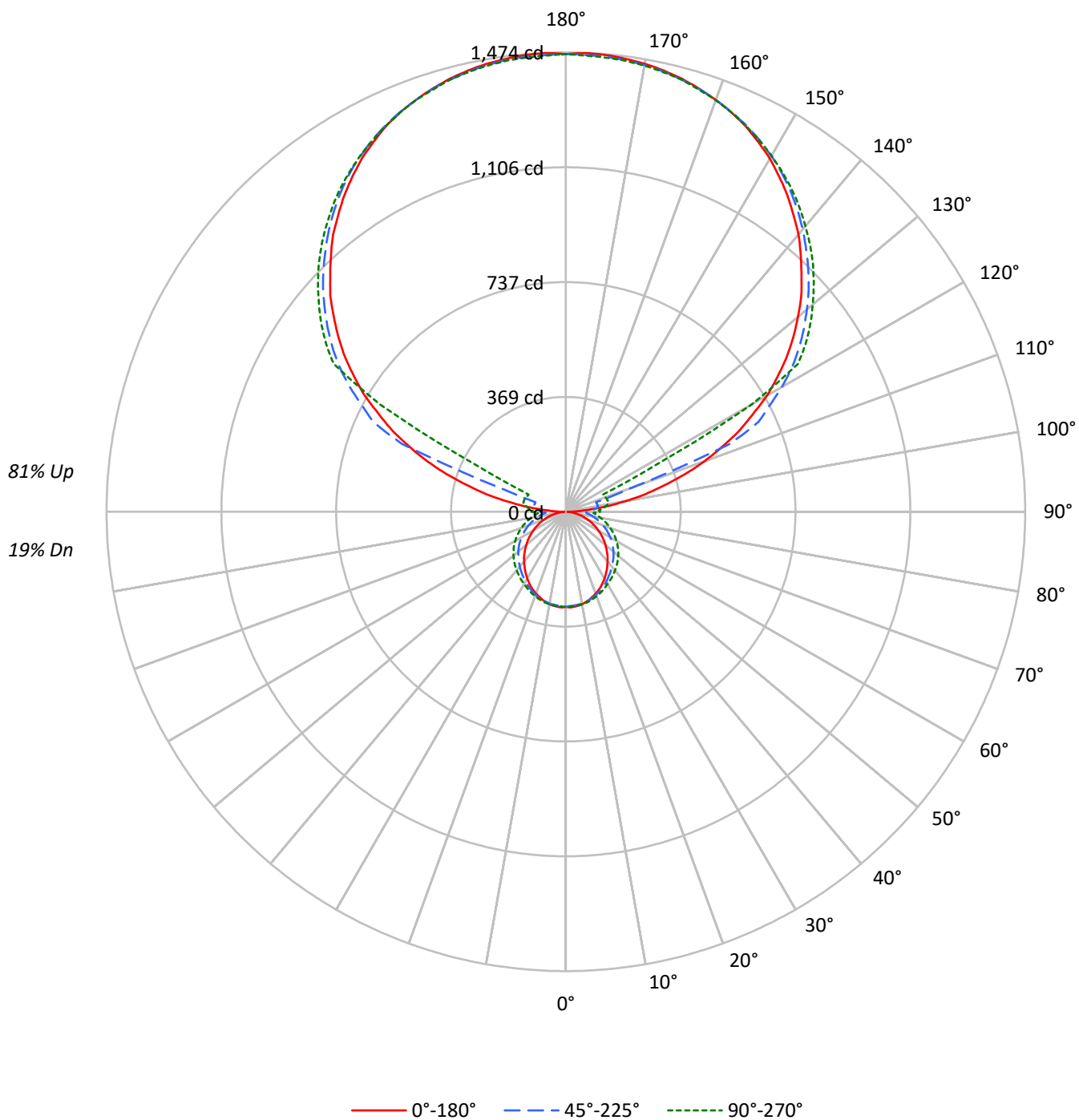
Lumens per Lamp: N/A
Luminaire Lumens: 5471.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 48
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	100	100	100	100	88	88	88	88	66	66	66	46	46	46	28	28	28
1	90	86	82	78	79	76	73	70	57	55	53	39	38	37	23	23	22
2	82	75	69	63	72	66	61	57	49	46	43	34	32	30	20	19	18
3	74	65	58	52	65	58	52	47	43	39	36	30	28	25	18	16	15
4	68	57	50	44	60	51	44	39	38	34	30	27	24	21	16	14	13
5	62	51	43	37	54	45	38	33	34	29	26	24	21	18	14	12	11
6	57	45	38	32	50	40	34	29	30	26	22	21	18	16	13	11	10
7	53	41	33	28	46	36	30	25	27	23	19	19	16	14	12	10	8
8	49	37	29	24	43	33	26	22	25	20	17	17	14	12	11	9	7
9	45	33	26	21	40	30	23	19	23	18	15	16	13	11	10	8	7
10	42	30	23	19	37	27	21	17	21	16	13	15	12	10	9	7	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4850	4623	4597
10°	4818	4463	4398
15°	4750	4297	4193
20°	4664	4123	4000
25°	4580	3956	3824
30°	4461	3788	3650
35°	4341	3624	3522
40°	4214	3483	3395
45°	4095	3356	3284
50°	3965	3237	3175
55°	3829	3112	3064
60°	3663	2981	2947
65°	3487	2832	2812
70°	3291	2670	2668
75°	3043	2509	2530
80°	2651	2343	2388
85°	2246	2183	2267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4095 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.9	0.5
10°-20°	82.9	1.5
20°-30°	125.7	2.3
30°-40°	153.0	2.8
40°-50°	164.7	3.0
50°-60°	159.9	2.9
60°-70°	139.6	2.6
70°-80°	107.5	2.0
80°-90°	74.6	1.4
90°-100°	98.1	1.8
100°-110°	216.7	4.0
110°-120°	502.6	9.2
120°-130°	807.2	14.8
130°-140°	848.9	15.5
140°-150°	784.7	14.3
150°-160°	630.1	11.5
160°-170°	406.0	7.4
170°-180°	139.7	2.6
0°-30°	237.5	4.3
0°-40°	390.6	7.1
0°-60°	715.1	13.1
0°-90°	1036.8	19.0
90°-120°	817.4	14.9
90°-150°	3258.3	59.6
90°-180°	4434.0	81.0
0°-180°	5471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	305	305	305	305	305	
5°	306	305	302	305	304	29
15°	292	293	293	297	296	82
25°	265	268	272	278	279	122
35°	229	236	244	254	257	143
45°	188	199	215	229	233	145
55°	144	160	183	198	204	129
65°	98	120	146	164	170	98
75°	54	79	107	126	132	58
85°	16	43	72	90	96	17
90°	6	43	80	103	110	7
95°	73	58	92	114	119	85
105°	325	370	103	130	139	348
115°	613	636	682	203	132	603
125°	865	878	913	932	939	771
135°	1069	1086	1100	1120	1122	826
145°	1240	1239	1257	1267	1264	776
155°	1365	1356	1368	1375	1366	629
165°	1438	1432	1435	1443	1435	406
175°	1471	1464	1466	1474	1463	140
180°	1468	1468	1468	1468	1468	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	305.1	305.1	305.1	305.1	305.1
2.5°	307.3	305.9	302.8	305.1	304.2
5°	305.9	304.6	302.0	304.6	304.2
7.5°	303.7	302.8	300.6	303.7	303.3
10°	301.1	300.2	298.9	302.4	302.0
12.5°	296.7	297.1	296.2	299.8	299.3
15°	291.8	292.7	292.7	296.7	296.2
17.5°	285.6	287.4	288.7	292.7	292.7
20°	279.4	281.6	283.4	288.3	288.3
22.5°	272.8	275.4	278.1	283.0	283.8
25°	265.3	268.4	272.3	277.6	279.0
27.5°	256.4	261.3	265.7	272.3	273.2
30°	247.6	253.3	259.1	266.2	267.5
32.5°	237.9	244.5	251.6	260.0	262.6
35°	228.6	236.1	244.5	254.2	257.3
37.5°	218.4	226.8	237.4	248.0	251.1
40°	208.2	218.0	229.9	241.4	245.4
42.5°	198.5	208.2	222.4	235.2	239.2
45°	187.5	199.4	214.9	228.6	233.0
47.5°	176.8	189.7	207.4	221.5	226.4
50°	165.8	179.5	199.4	214.4	219.3
52.5°	155.2	169.8	191.0	206.5	211.8
55°	143.7	159.6	182.6	198.5	204.3
57.5°	132.6	150.3	173.3	190.6	196.3
60°	120.7	139.7	164.9	181.7	187.9
62.5°	110.1	130.0	155.2	173.3	179.1
65°	98.1	119.8	145.9	164.0	169.8
67.5°	87.5	110.1	136.6	154.7	160.9
70°	76.0	99.0	126.4	145.5	150.8
72.5°	65.4	89.3	117.2	135.7	142.4
75°	54.4	79.1	107.4	126.4	132.2
77.5°	43.8	69.4	98.1	117.2	123.4
80°	33.2	60.1	88.9	107.4	113.6
82.5°	24.3	50.8	80.0	98.6	104.3
85°	15.9	43.3	71.6	90.2	96.4
87.5°	9.7	36.3	64.5	82.7	88.4
90°	5.5	42.8	79.6	102.6	110.0
92.5°	30.6	49.7	79.9	99.2	105.6
95°	72.6	58.3	92.2	114.3	118.6
97.5°	127.4	59.3	101.9	121.5	127.8
100°	191.1	62.0	104.8	129.7	136.6
102.5°	260.9	273.2	103.8	131.4	139.5
105°	325.2	369.8	102.8	130.0	139.1
107.5°	400.6	437.8	101.8	128.6	137.7
110°	472.4	503.6	218.2	126.1	135.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	540.4	566.6	568.9	125.1	133.2
115°	612.7	635.5	682.0	203.4	131.8
117.5°	674.9	699.7	736.3	597.7	323.7
120°	745.0	762.7	799.6	824.7	686.1
122.5°	804.5	822.0	859.5	877.9	882.9
125°	864.6	878.5	912.7	932.2	939.3
127.5°	919.9	934.3	962.2	983.8	988.9
130°	971.9	988.4	1009.4	1031.7	1034.3
132.5°	1025.1	1038.4	1056.8	1076.4	1079.0
135°	1069.2	1086.2	1100.2	1120.1	1121.5
137.5°	1115.9	1128.7	1141.6	1160.6	1160.4
140°	1161.6	1169.7	1182.3	1199.0	1196.3
142.5°	1199.9	1206.9	1220.7	1234.5	1231.4
145°	1239.8	1238.8	1256.8	1267.0	1263.9
147.5°	1274.9	1271.7	1289.8	1295.5	1292.6
150°	1308.9	1301.5	1318.5	1324.8	1319.5
152.5°	1337.6	1329.1	1345.0	1351.4	1344.0
155°	1365.2	1355.6	1368.4	1374.8	1366.3
157.5°	1387.5	1379.0	1388.6	1396.0	1387.5
160°	1406.6	1400.3	1406.6	1413.0	1405.6
162.5°	1423.6	1417.3	1422.6	1430.0	1420.4
165°	1438.5	1432.1	1435.3	1442.8	1435.3
167.5°	1450.2	1443.8	1447.0	1454.4	1444.9
170°	1459.8	1453.4	1455.5	1462.9	1453.4
172.5°	1466.1	1459.8	1461.9	1469.3	1459.8
175°	1471.4	1464.0	1466.1	1473.6	1462.9
177.5°	1473.6	1466.1	1467.2	1474.6	1465.1
180°	1468.3	1468.3	1468.3	1468.3	1468.3

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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	6.69	7.34	7.87	8.51	10.16	9.77	10.42	10.95	11.58	13.24
	3H	8.13	8.72	9.32	9.90	11.56	12.34	12.93	13.53	14.10	15.77
	4H	8.60	9.16	9.80	10.33	12.00	13.58	14.14	14.78	15.32	16.99
	6H	8.88	9.39	10.08	10.57	12.25	14.87	15.39	16.07	16.56	18.24
	8H	8.93	9.42	10.13	10.61	12.28	15.52	16.02	16.73	17.20	18.88
	12H	8.94	9.40	10.14	10.59	12.28	16.24	16.71	17.45	17.89	19.59
4H	2H	7.72	8.28	8.92	9.45	11.12	10.07	10.63	11.28	11.81	13.48
	3H	9.41	9.88	10.61	11.08	12.76	12.85	13.32	14.05	14.52	16.20
	4H	10.02	10.46	11.23	11.64	13.34	14.26	14.69	15.46	15.88	17.58
	6H	10.43	10.80	11.64	12.01	13.69	15.71	16.09	16.92	17.29	18.98
	8H	10.53	10.88	11.74	12.08	13.78	16.46	16.81	17.67	18.01	19.72
	12H	10.56	10.88	11.79	12.09	13.80	17.28	17.60	18.51	18.81	20.52
8H	4H	10.80	11.14	12.00	12.34	14.05	14.38	14.73	15.59	15.93	17.64
	6H	11.42	11.71	12.65	12.95	14.65	16.00	16.29	17.23	17.54	19.24
	8H	11.64	11.89	12.87	13.11	14.83	16.89	17.14	18.12	18.36	20.08
	12H	11.76	11.99	13.00	13.20	14.95	17.87	18.10	19.11	19.31	21.06
12H	4H	10.98	11.30	12.21	12.51	14.22	14.35	14.67	15.57	15.87	17.58
	6H	11.75	12.01	12.98	13.22	14.94	16.03	16.28	17.26	17.50	19.22
	8H	12.04	12.27	13.28	13.48	15.23	16.94	17.17	18.18	18.38	20.13