

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: P998102

Luminaire Tested: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-F_3500K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998102
REPORT IS A COMBINATION OF REPORTS P983839 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-F_3500K
Description: Define 2 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

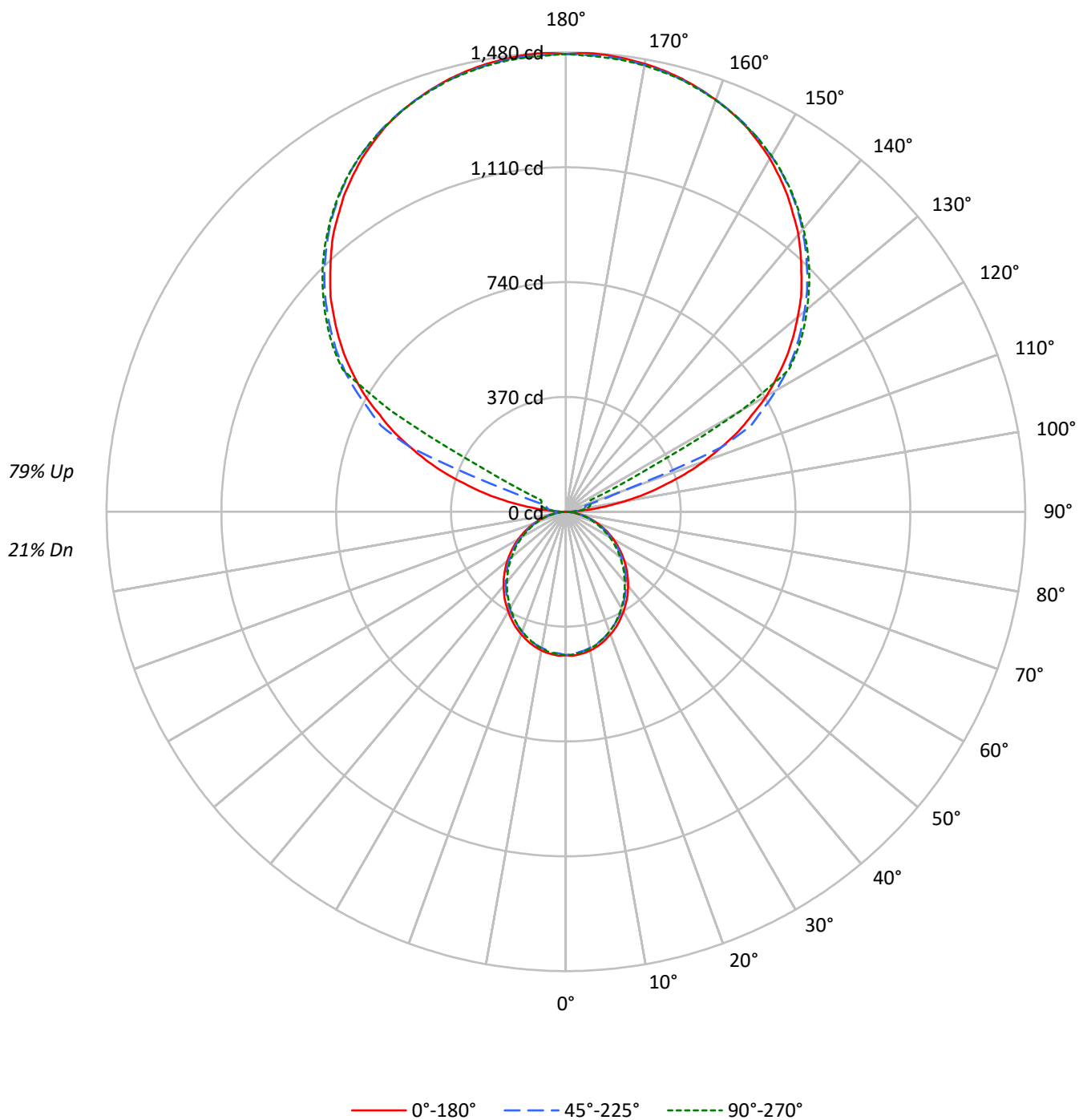
Lumens per Lamp: N/A
Luminaire Lumens: 5500.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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	50	30	10
RCR																				
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21		
1	91	87	84	80	81	77	74	72	59	57	55	42	41	40	26	26	25	18		
2	83	76	70	65	73	68	63	59	52	48	46	37	35	33	23	22	21	15		
3	76	67	60	54	67	59	54	49	45	41	38	32	30	28	20	19	18	13		
4	69	59	51	46	61	52	46	41	40	36	32	29	26	24	18	17	15	11		
5	63	52	45	39	56	47	40	35	36	31	28	26	23	21	16	15	13	10		
6	58	47	39	34	51	42	35	30	32	28	24	23	20	18	15	13	12	8		
7	54	42	34	29	47	38	31	26	29	24	21	21	18	16	14	12	10	7		
8	50	38	31	26	44	34	28	23	26	22	18	19	16	14	12	11	9	7		
9	46	34	27	23	41	31	25	20	24	20	16	18	15	12	11	10	8	6		
10	43	31	25	20	38	28	22	18	22	18	15	16	13	11	11	9	8	5		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7310	7310	7310
5°	7322	6969	6918
10°	7262	6651	6518
15°	7156	6331	6099
20°	7013	5983	5700
25°	6870	5619	5302
30°	6688	5277	4883
35°	6520	4917	4473
40°	6309	4562	4085
45°	6100	4210	3706
50°	5873	3850	3311
55°	5633	3467	2937
60°	5362	3050	2548
65°	5066	2628	2140
70°	4694	2167	1728
75°	4173	1670	1334
80°	3545	1136	860
85°	2571	528	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6100 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.8
10°-20°	122.3	2.2
20°-30°	179.7	3.3
30°-40°	208.7	3.8
40°-50°	208.5	3.8
50°-60°	181.8	3.3
60°-70°	134.4	2.4
70°-80°	76.0	1.4
80°-90°	22.7	0.4
90°-100°	48.6	0.9
100°-110°	181.2	3.3
110°-120°	480.7	8.7
120°-130°	797.2	14.5
130°-140°	846.8	15.4
140°-150°	787.0	14.3
150°-160°	632.7	11.5
160°-170°	407.7	7.4
170°-180°	140.3	2.6
0°-30°	345.5	6.3
0°-40°	554.2	10.1
0°-60°	944.5	17.2
0°-90°	1177.6	21.4
90°-120°	710.5	12.9
90°-150°	3141.6	57.1
90°-180°	4322.0	78.6
0°-180°	5500.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	462	460	455	459	458	44
15°	440	437	431	433	431	124
25°	398	394	387	388	387	183
35°	343	339	332	329	327	214
45°	279	276	270	265	263	216
55°	211	209	203	198	196	189
65°	142	140	135	131	129	141
75°	75	74	72	69	70	80
85°	18	18	17	16	16	20
90°	1	13	21	27	29	5
95°	69	34	42	47	46	82
105°	324	356	65	77	81	347
115°	613	632	658	164	88	604
125°	867	881	902	909	912	774
135°	1073	1090	1100	1111	1108	829
145°	1245	1244	1262	1270	1264	779
155°	1371	1361	1374	1380	1372	632
165°	1444	1438	1441	1449	1441	408
175°	1478	1470	1472	1480	1469	141
180°	1474	1474	1474	1474	1474	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	461.8	461.8	461.8	461.8	461.8
2.5°	464.5	462.3	457.4	461.8	461.0
5°	461.8	460.1	455.2	458.7	457.8
7.5°	458.7	456.1	451.2	454.7	453.8
10°	453.8	450.7	445.4	449.0	447.6
12.5°	447.2	444.5	439.2	441.4	440.5
15°	439.6	437.0	431.2	433.0	430.8
17.5°	430.3	427.6	421.9	424.1	421.9
20°	420.1	417.4	411.2	412.5	410.8
22.5°	409.9	405.9	400.1	400.1	399.2
25°	397.9	394.3	386.8	387.7	386.8
27.5°	384.6	381.5	375.7	374.4	372.1
30°	371.2	367.7	361.0	359.7	357.9
32.5°	357.0	354.4	347.3	344.6	342.8
35°	343.3	338.8	331.7	329.1	326.8
37.5°	327.7	323.7	316.6	313.5	311.3
40°	311.7	308.2	301.1	297.1	295.3
42.5°	296.2	292.6	285.5	281.1	278.4
45°	279.3	276.2	269.6	264.7	262.9
47.5°	262.9	259.8	252.7	247.8	245.1
50°	245.6	243.4	237.1	230.9	228.7
52.5°	228.7	225.6	219.8	214.9	211.8
55°	211.4	208.7	203.4	198.1	195.8
57.5°	194.1	191.8	186.1	180.7	179.0
60°	176.7	175.0	168.7	163.9	162.5
62.5°	159.9	156.8	152.3	147.9	146.1
65°	142.5	139.9	135.4	131.4	129.2
67.5°	124.8	122.6	118.6	115.5	113.7
70°	108.4	106.6	102.6	99.5	97.7
72.5°	91.5	89.7	87.5	84.4	83.0
75°	74.6	73.7	71.5	68.8	69.7
77.5°	59.5	57.7	56.8	55.5	54.2
80°	44.4	44.0	43.1	41.7	40.9
82.5°	30.2	30.2	29.8	28.0	28.0
85°	18.2	17.8	17.3	16.0	15.5
87.5°	8.0	7.1	6.2	4.9	4.4
90°	1.1	12.8	21.3	26.7	28.8
92.5°	26.7	22.4	25.6	27.7	28.8
95°	69.3	34.1	41.6	46.9	45.9
97.5°	124.8	37.3	54.4	57.6	58.7
100°	188.8	42.7	60.8	69.3	71.5
102.5°	259.2	257.1	62.9	74.7	77.9
105°	324.3	356.3	65.1	76.8	81.1
107.5°	400.1	426.7	67.2	78.9	83.2
110°	472.6	495.0	186.7	80.0	84.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	540.9	560.1	542.0	82.1	85.3
115°	613.4	631.6	658.2	164.3	87.5
117.5°	676.4	697.7	715.9	563.3	283.8
120°	746.8	762.8	782.0	794.8	650.8
122.5°	806.5	823.6	844.9	851.4	852.4
125°	867.4	881.2	901.5	909.0	912.2
127.5°	922.8	937.8	953.8	964.4	965.5
130°	975.1	992.2	1003.9	1015.6	1014.6
132.5°	1028.4	1042.3	1054.1	1063.7	1062.6
135°	1073.3	1090.3	1099.9	1110.6	1108.5
137.5°	1120.2	1133.0	1143.7	1154.3	1151.1
140°	1166.1	1174.6	1186.3	1195.9	1190.6
142.5°	1204.5	1211.9	1225.8	1234.4	1229.0
145°	1245.0	1244.0	1262.1	1269.6	1264.2
147.5°	1280.2	1277.0	1295.2	1300.5	1296.2
150°	1314.4	1306.9	1324.0	1330.4	1325.0
152.5°	1343.2	1334.6	1350.6	1357.0	1349.6
155°	1370.9	1361.3	1374.1	1380.5	1372.0
157.5°	1393.3	1384.8	1394.4	1401.8	1393.3
160°	1412.5	1406.1	1412.5	1418.9	1411.4
162.5°	1429.6	1423.2	1428.5	1436.0	1426.4
165°	1444.5	1438.1	1441.3	1448.8	1441.3
167.5°	1456.3	1449.9	1453.1	1460.5	1450.9
170°	1465.9	1459.5	1461.6	1469.1	1459.5
172.5°	1472.3	1465.9	1468.0	1475.5	1465.9
175°	1477.6	1470.1	1472.3	1479.7	1469.1
177.5°	1479.7	1472.3	1473.3	1480.8	1471.2
180°	1474.4	1474.4	1474.4	1474.4	1474.4

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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	8.59	9.24	9.76	10.39	12.02	9.37	10.02	10.54	11.17	12.80
	3H	9.91	10.49	11.09	11.65	13.30	10.98	11.56	12.16	12.73	14.37
	4H	10.30	10.86	11.49	12.02	13.67	11.56	12.12	12.75	13.28	14.92
	6H	10.51	11.02	11.70	12.19	13.84	11.95	12.46	13.15	13.63	15.29
	8H	10.54	11.02	11.73	12.20	13.85	12.06	12.54	13.25	13.72	15.37
	12H	10.52	10.98	11.72	12.15	13.83	12.09	12.55	13.29	13.73	15.40
4H	2H	9.03	9.58	10.22	10.75	12.39	9.67	10.23	10.87	11.39	13.04
	3H	10.53	10.99	11.72	12.18	13.84	11.43	11.90	12.63	13.08	14.74
	4H	11.03	11.45	12.22	12.63	14.30	12.11	12.53	13.30	13.71	15.39
	6H	11.32	11.68	12.52	12.88	14.54	12.59	12.96	13.79	14.15	15.82
	8H	11.37	11.71	12.57	12.90	14.58	12.73	13.07	13.93	14.26	15.94
	12H	11.36	11.67	12.57	12.87	14.55	12.78	13.09	14.00	14.29	15.98
8H	4H	11.18	11.52	12.38	12.71	14.40	12.18	12.52	13.38	13.70	15.39
	6H	11.56	11.84	12.78	13.07	14.75	12.74	13.02	13.95	14.25	15.93
	8H	11.66	11.90	12.88	13.11	14.81	12.92	13.17	14.15	14.37	16.07
	12H	11.68	11.90	12.91	13.10	14.83	13.01	13.23	14.24	14.43	16.16
12H	4H	11.16	11.47	12.37	12.66	14.35	12.13	12.44	13.34	13.64	15.32
	6H	11.57	11.82	12.80	13.03	14.73	12.73	12.97	13.95	14.18	15.88
	8H	11.68	11.89	12.90	13.10	14.83	12.91	13.13	14.14	14.33	16.06