

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: P998099

Luminaire Tested: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_5000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998099
REPORT IS A COMBINATION OF REPORTS P983836 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_5000K
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

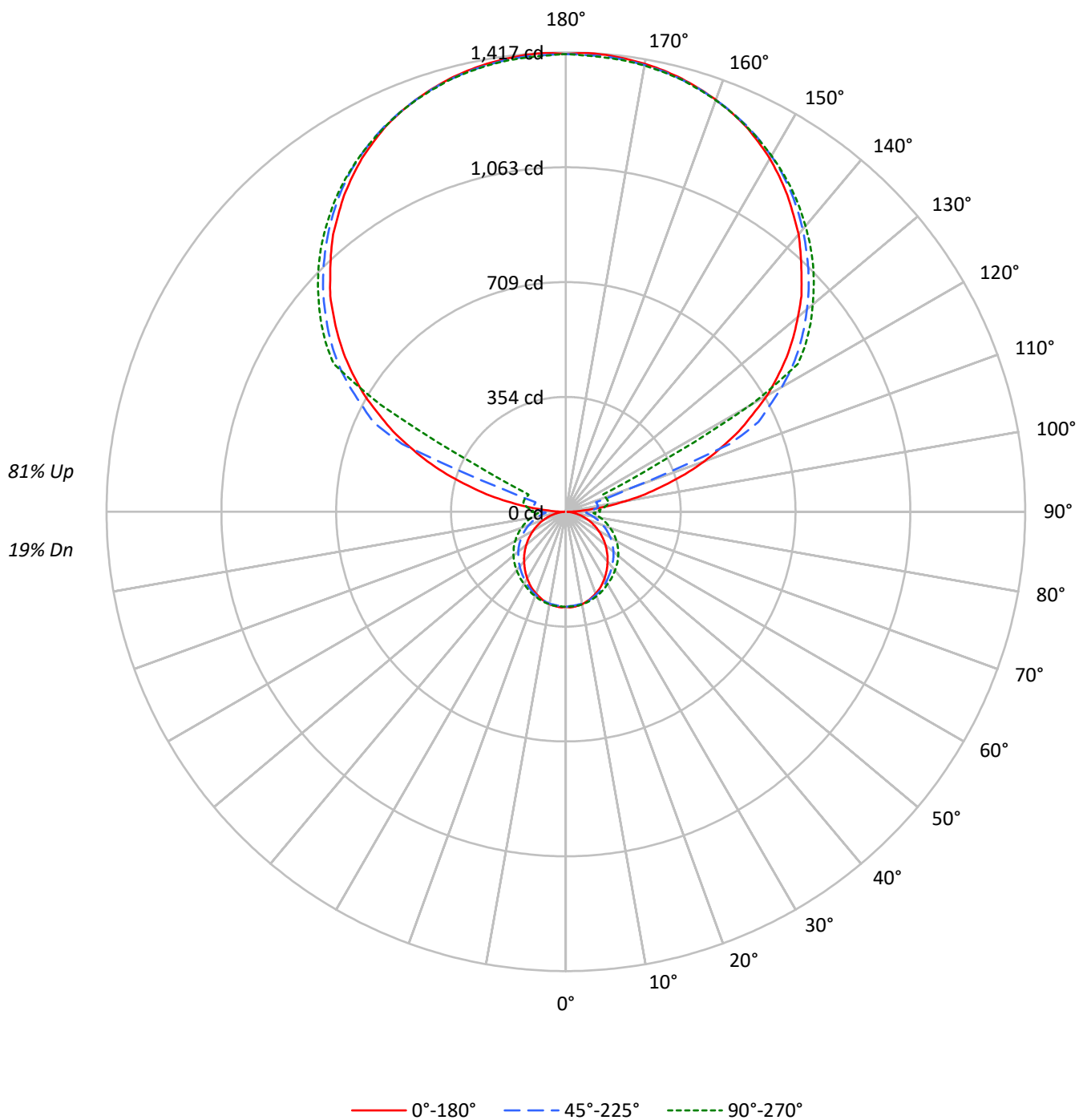
Lumens per Lamp: N/A
Luminaire Lumens: 5260.1 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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

TEST NUMBER: P998099

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_5000K

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	11	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°	4643	4643	4643
5°	4663	4444	4419
10°	4631	4290	4228
15°	4566	4131	4032
20°	4484	3963	3845
25°	4402	3803	3676
30°	4288	3641	3508
35°	4172	3483	3386
40°	4052	3348	3264
45°	3936	3226	3157
50°	3812	3112	3052
55°	3680	2991	2946
60°	3520	2866	2832
65°	3356	2723	2703
70°	3166	2568	2563
75°	2926	2413	2433
80°	2547	2250	2296
85°	2161	2101	2180

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3936 cd/sqm

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CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.8	0.5
10°-20°	79.7	1.5
20°-30°	120.8	2.3
30°-40°	147.1	2.8
40°-50°	158.3	3.0
50°-60°	153.7	2.9
60°-70°	134.3	2.6
70°-80°	103.3	2.0
80°-90°	71.7	1.4
90°-100°	94.3	1.8
100°-110°	208.4	4.0
110°-120°	483.2	9.2
120°-130°	776.1	14.8
130°-140°	816.2	15.5
140°-150°	754.5	14.3
150°-160°	605.8	11.5
160°-170°	390.4	7.4
170°-180°	134.4	2.6
0°-30°	228.3	4.3
0°-40°	375.5	7.1
0°-60°	687.5	13.1
0°-90°	996.7	18.9
90°-120°	786.0	14.9
90°-150°	3132.7	59.6
90°-180°	4263.0	81.0
0°-180°	5260.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	293	293	293	293	293	
5°	294	293	290	293	292	28
15°	280	281	281	285	285	79
25°	255	258	262	267	268	117
35°	220	227	235	244	247	137
45°	180	192	207	220	224	139
55°	138	153	176	191	196	124
65°	94	115	140	158	163	94
75°	52	76	103	122	127	55
85°	15	42	69	87	93	16
90°	5	41	76	99	106	7
95°	70	56	89	110	114	81
105°	313	356	99	125	134	334
115°	589	611	656	196	127	580
125°	831	845	878	896	903	742
135°	1028	1044	1058	1077	1078	794
145°	1192	1191	1208	1218	1215	746
155°	1313	1303	1316	1322	1314	605
165°	1383	1377	1380	1387	1380	391
175°	1415	1408	1410	1417	1407	135
180°	1412	1412	1412	1412	1412	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	293.3	293.3	293.3	293.3	293.3
2.5°	295.4	294.1	291.1	293.3	292.4
5°	294.1	292.8	290.3	292.8	292.4
7.5°	292.0	291.1	289.0	292.0	291.6
10°	289.4	288.6	287.3	290.7	290.3
12.5°	285.2	285.6	284.8	288.2	287.7
15°	280.5	281.4	281.4	285.2	284.8
17.5°	274.6	276.3	277.5	281.4	281.4
20°	268.6	270.7	272.4	277.1	277.1
22.5°	262.2	264.8	267.3	272.0	272.9
25°	255.0	258.0	261.8	266.9	268.2
27.5°	246.5	251.2	255.4	261.8	262.7
30°	238.0	243.5	249.1	255.9	257.1
32.5°	228.7	235.0	241.8	249.9	252.5
35°	219.7	227.0	235.0	244.4	247.4
37.5°	210.0	218.0	228.2	238.4	241.4
40°	200.2	209.5	221.0	232.1	235.9
42.5°	190.8	200.2	213.8	226.1	229.9
45°	180.2	191.7	206.6	219.7	224.0
47.5°	170.0	182.3	199.3	212.9	217.6
50°	159.4	172.6	191.7	206.1	210.8
52.5°	149.2	163.2	183.6	198.5	203.6
55°	138.1	153.4	175.5	190.8	196.4
57.5°	127.5	144.5	166.6	183.2	188.7
60°	116.0	134.3	158.5	174.7	180.6
62.5°	105.8	125.0	149.2	166.6	172.1
65°	94.4	115.2	140.3	157.7	163.2
67.5°	84.2	105.8	131.3	148.8	154.7
70°	73.1	95.2	121.6	139.8	144.9
72.5°	62.9	85.9	112.6	130.5	136.9
75°	52.3	76.1	103.3	121.6	127.1
77.5°	42.1	66.7	94.4	112.6	118.6
80°	31.9	57.8	85.4	103.3	109.2
82.5°	23.4	48.9	76.9	94.8	100.3
85°	15.3	41.7	68.9	86.7	92.7
87.5°	9.4	34.9	62.1	79.5	85.0
90°	5.3	41.2	76.5	98.6	105.8
92.5°	29.3	47.9	76.8	95.5	101.6
95°	69.8	56.1	88.7	109.9	114.0
97.5°	122.5	57.1	98.0	116.8	122.9
100°	183.8	59.6	100.7	124.6	131.3
102.5°	250.8	262.8	99.8	126.3	134.1
105°	312.6	355.7	98.9	124.9	133.7
107.5°	385.2	420.9	98.0	123.6	132.4
110°	454.2	484.2	209.8	121.2	130.0

TEST NUMBER: P998099

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-D_5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	519.6	544.8	547.0	120.4	128.0
115°	589.0	611.1	655.7	195.6	126.7
117.5°	648.9	672.7	707.9	574.6	311.2
120°	716.3	733.3	768.7	792.9	659.7
122.5°	773.5	790.3	826.4	844.0	848.9
125°	831.4	844.6	877.6	896.2	903.2
127.5°	884.5	898.3	925.1	945.9	950.8
130°	934.5	950.4	970.6	992.0	994.4
132.5°	985.6	998.4	1016.0	1035.0	1037.4
135°	1028.0	1044.3	1057.8	1076.9	1078.3
137.5°	1072.9	1085.2	1097.6	1115.8	1115.8
140°	1116.9	1124.6	1136.8	1152.8	1150.2
142.5°	1153.6	1160.4	1173.7	1186.9	1183.9
145°	1192.1	1191.0	1208.4	1218.1	1215.1
147.5°	1225.8	1222.7	1240.1	1245.6	1242.8
150°	1258.4	1251.3	1267.6	1273.8	1268.7
152.5°	1286.0	1277.9	1293.2	1299.3	1292.2
155°	1312.6	1303.4	1315.7	1321.8	1313.6
157.5°	1334.0	1325.9	1335.1	1342.2	1334.0
160°	1352.4	1346.3	1352.4	1358.6	1351.4
162.5°	1368.8	1362.6	1367.7	1374.9	1365.7
165°	1383.1	1376.9	1380.0	1387.2	1380.0
167.5°	1394.3	1388.2	1391.2	1398.4	1389.2
170°	1403.5	1397.4	1399.4	1406.6	1397.4
172.5°	1409.6	1403.5	1405.5	1412.7	1403.5
175°	1414.7	1407.6	1409.6	1416.8	1406.6
177.5°	1416.8	1409.6	1410.6	1417.8	1408.6
180°	1411.7	1411.7	1411.7	1411.7	1411.7

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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	6.55	7.20	7.73	8.37	10.02	9.63	10.28	10.81	11.45	13.10
	3H	8.00	8.59	9.18	9.76	11.43	12.20	12.79	13.39	13.96	15.63
	4H	8.47	9.03	9.66	10.20	11.87	13.45	14.01	14.64	15.18	16.85
	6H	8.74	9.26	9.94	10.43	12.11	14.73	15.25	15.93	16.42	18.11
	8H	8.79	9.28	10.00	10.47	12.15	15.39	15.88	16.59	17.07	18.74
	12H	8.80	9.27	10.01	10.45	12.15	16.11	16.57	17.31	17.75	19.45
4H	2H	7.58	8.14	8.78	9.31	10.98	9.93	10.49	11.14	11.67	13.34
	3H	9.27	9.74	10.48	10.94	12.62	12.71	13.18	13.92	14.38	16.06
	4H	9.89	10.32	11.09	11.51	13.21	14.12	14.55	15.33	15.74	17.44
	6H	10.29	10.66	11.50	11.87	13.56	15.58	15.95	16.78	17.16	18.84
	8H	10.39	10.74	11.60	11.94	13.65	16.33	16.68	17.53	17.88	19.58
	12H	10.43	10.75	11.65	11.95	13.66	17.15	17.46	18.37	18.67	20.38
8H	4H	10.66	11.01	11.87	12.21	13.91	14.25	14.60	15.45	15.79	17.50
	6H	11.28	11.57	12.51	12.82	14.52	15.87	16.16	17.09	17.40	19.10
	8H	11.50	11.76	12.73	12.97	14.70	16.75	17.01	17.98	18.22	19.95
	12H	11.63	11.85	12.86	13.07	14.82	17.74	17.96	18.97	19.18	20.93
12H	4H	10.85	11.17	12.07	12.37	14.08	14.21	14.53	15.43	15.74	17.45
	6H	11.62	11.87	12.85	13.09	14.81	15.89	16.14	17.12	17.36	19.08
	8H	11.91	12.13	13.14	13.35	15.10	16.81	17.03	18.04	18.25	20.00