

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: P998117

Luminaire Tested: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-D

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998117
REPORT IS A COMBINATION OF REPORTS P983854 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB35-4F0-XX-W2A-D
Description: Define 2 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

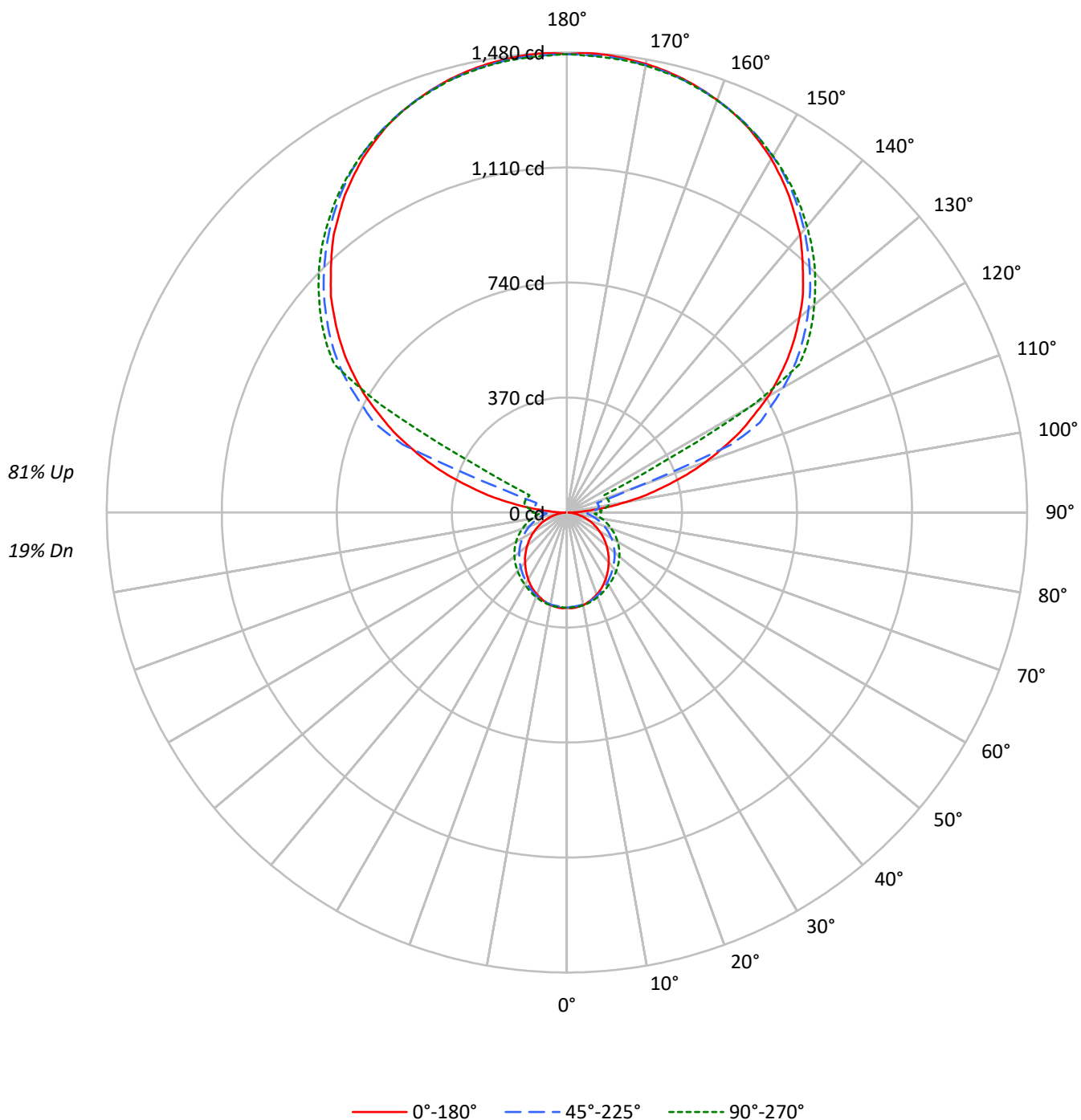
Lumens per Lamp: N/A
Luminaire Lumens: 5494.0 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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°	4850	4850	4850
5°	4872	4643	4617
10°	4839	4483	4417
15°	4770	4315	4212
20°	4684	4141	4017
25°	4599	3973	3840
30°	4479	3804	3665
35°	4360	3639	3537
40°	4232	3498	3409
45°	4112	3370	3298
50°	3982	3252	3188
55°	3845	3126	3076
60°	3678	2994	2959
65°	3505	2843	2824
70°	3309	2682	2678
75°	3054	2520	2542
80°	2659	2351	2399
85°	2260	2192	2276

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4112 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	0.5
10°-20°	83.3	1.5
20°-30°	126.2	2.3
30°-40°	153.7	2.8
40°-50°	165.4	3.0
50°-60°	160.6	2.9
60°-70°	140.2	2.6
70°-80°	108.0	2.0
80°-90°	74.9	1.4
90°-100°	98.5	1.8
100°-110°	217.6	4.0
110°-120°	504.7	9.2
120°-130°	810.6	14.8
130°-140°	852.4	15.5
140°-150°	788.0	14.3
150°-160°	632.7	11.5
160°-170°	407.7	7.4
170°-180°	140.3	2.6
0°-30°	238.5	4.3
0°-40°	392.2	7.1
0°-60°	718.2	13.1
0°-90°	1041.3	19.0
90°-120°	820.9	14.9
90°-150°	3271.9	59.6
90°-180°	4453.0	81.1
0°-180°	5494.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	306	306	306	306	306	
5°	307	306	303	306	306	29
15°	293	294	294	298	298	83
25°	266	270	274	279	280	123
35°	230	237	246	255	258	143
45°	188	200	216	230	234	145
55°	144	160	183	199	205	129
65°	99	120	146	165	170	98
75°	55	80	108	127	133	58
85°	16	44	72	91	97	17
90°	6	43	80	103	110	7
95°	73	58	93	115	119	85
105°	326	371	103	130	140	349
115°	615	638	685	204	132	605
125°	868	882	917	936	943	774
135°	1074	1091	1105	1125	1126	830
145°	1245	1244	1262	1272	1269	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°	306.4	306.4	306.4	306.4	306.4
2.5°	308.6	307.3	304.1	306.4	305.5
5°	307.3	305.9	303.3	305.9	305.5
7.5°	305.0	304.1	301.9	305.0	304.6
10°	302.4	301.5	300.2	303.7	303.3
12.5°	297.9	298.4	297.5	301.0	300.6
15°	293.0	293.9	293.9	297.9	297.5
17.5°	286.8	288.6	289.9	293.9	293.9
20°	280.6	282.8	284.6	289.5	289.5
22.5°	274.0	276.6	279.3	284.2	285.1
25°	266.4	269.5	273.5	278.8	280.2
27.5°	257.5	262.4	266.9	273.5	274.4
30°	248.6	254.4	260.2	267.3	268.6
32.5°	238.9	245.5	252.6	261.1	263.7
35°	229.6	237.1	245.5	255.3	258.4
37.5°	219.3	227.8	238.4	249.1	252.2
40°	209.1	218.9	230.9	242.4	246.4
42.5°	199.4	209.1	223.3	236.2	240.2
45°	188.3	200.3	215.8	229.6	234.0
47.5°	177.6	190.5	208.2	222.5	227.3
50°	166.5	180.3	200.3	215.3	220.2
52.5°	155.8	170.5	191.8	207.4	212.7
55°	144.3	160.3	183.4	199.4	205.1
57.5°	133.2	151.0	174.1	191.4	197.1
60°	121.2	140.3	165.6	182.5	188.7
62.5°	110.6	130.5	155.8	174.1	179.8
65°	98.6	120.3	146.5	164.7	170.5
67.5°	87.9	110.6	137.2	155.4	161.6
70°	76.4	99.5	127.0	146.1	151.4
72.5°	65.7	89.7	117.7	136.3	143.0
75°	54.6	79.5	107.9	127.0	132.8
77.5°	44.0	69.7	98.6	117.7	123.9
80°	33.3	60.4	89.2	107.9	114.1
82.5°	24.4	51.1	80.4	99.0	104.8
85°	16.0	43.5	71.9	90.6	96.8
87.5°	9.8	36.4	64.8	83.0	88.8
90°	5.5	43.0	79.9	103.1	110.5
92.5°	30.7	49.9	80.2	99.6	106.1
95°	72.9	58.5	92.7	114.8	119.2
97.5°	127.9	59.5	102.4	122.0	128.4
100°	191.9	62.2	105.2	130.1	137.2
102.5°	261.9	274.4	104.2	132.0	140.1
105°	326.5	371.4	103.3	130.5	139.7
107.5°	402.3	439.6	102.3	129.1	138.3
110°	474.4	505.7	219.1	126.6	135.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	542.7	569.0	571.3	125.6	133.7
115°	615.2	638.3	684.8	204.3	132.3
117.5°	677.7	702.6	739.4	600.2	325.1
120°	748.1	765.9	802.9	828.1	689.0
122.5°	807.8	825.4	863.1	881.6	886.6
125°	868.3	882.1	916.6	936.1	943.3
127.5°	923.7	938.2	966.2	987.9	993.0
130°	976.0	992.6	1013.7	1036.0	1038.6
132.5°	1029.3	1042.7	1061.2	1081.0	1083.5
135°	1073.7	1090.7	1104.8	1124.8	1126.3
137.5°	1120.6	1133.4	1146.4	1165.4	1165.3
140°	1166.5	1174.6	1187.2	1203.9	1201.3
142.5°	1204.9	1211.9	1225.8	1239.7	1236.5
145°	1245.0	1244.0	1262.1	1272.3	1269.1
147.5°	1280.2	1277.0	1295.2	1300.9	1298.0
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	6.70	7.36	7.88	8.52	10.18	9.78	10.43	10.96	11.60	13.25
	3H	8.15	8.74	9.34	9.91	11.58	12.36	12.94	13.54	14.12	15.78
	4H	8.62	9.18	9.81	10.35	12.02	13.60	14.16	14.79	15.33	17.00
	6H	8.89	9.41	10.09	10.58	12.27	14.89	15.40	16.09	16.58	18.26
	8H	8.95	9.44	10.15	10.63	12.30	15.54	16.03	16.74	17.22	18.89
	12H	8.96	9.42	10.16	10.60	12.30	16.26	16.72	17.46	17.91	19.60
4H	2H	7.73	8.29	8.94	9.47	11.14	10.09	10.65	11.29	11.82	13.49
	3H	9.43	9.90	10.63	11.09	12.78	12.86	13.33	14.07	14.53	16.21
	4H	10.04	10.47	11.25	11.66	13.36	14.27	14.71	15.48	15.89	17.59
	6H	10.44	10.82	11.65	12.02	13.71	15.73	16.10	16.94	17.31	19.00
	8H	10.55	10.90	11.75	12.09	13.80	16.48	16.83	17.69	18.03	19.73
	12H	10.58	10.90	11.80	12.11	13.82	17.30	17.62	18.52	18.83	20.54
8H	4H	10.81	11.16	12.02	12.36	14.07	14.40	14.75	15.61	15.95	17.65
	6H	11.44	11.73	12.66	12.97	14.67	16.02	16.31	17.25	17.55	19.25
	8H	11.66	11.91	12.89	13.13	14.85	16.91	17.16	18.14	18.38	20.10
	12H	11.78	12.00	13.01	13.22	14.97	17.89	18.11	19.13	19.33	21.08
12H	4H	11.00	11.32	12.22	12.53	14.24	14.36	14.68	15.59	15.89	17.60
	6H	11.77	12.02	13.00	13.24	14.96	16.04	16.30	17.27	17.51	19.23
	8H	12.06	12.29	13.30	13.50	15.25	16.96	17.18	18.20	18.40	20.15