

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: P998134

Luminaire Tested: SA2XXDIP-B290D1080UB50-4F0-XX-W2A-D4

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998134
REPORT IS A COMBINATION OF REPORTS P983874 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB50-4F0-XX-W2A-D4
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

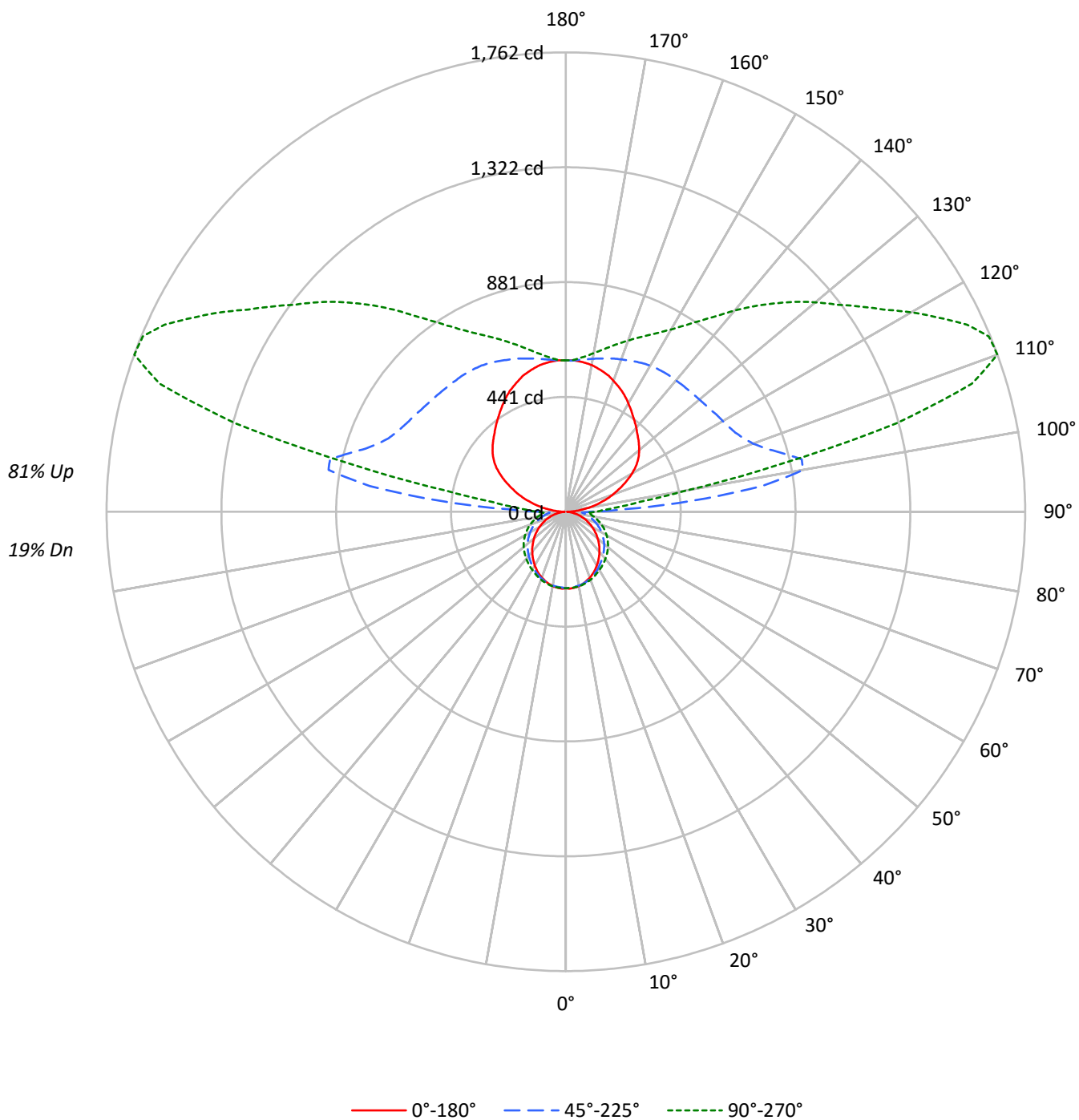
Lumens per Lamp: N/A
Luminaire Lumens: 5169.7 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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	40	38	37	24	23	22
2	82	75	69	64	72	66	61	57	50	46	43	34	32	30	20	19	18
3	75	65	58	52	65	58	52	47	43	39	36	30	28	25	18	17	15
4	68	58	50	44	60	51	44	39	38	34	30	27	24	22	16	14	13
5	62	51	43	37	55	45	38	33	34	29	26	24	21	18	14	13	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	9
8	49	37	29	24	43	33	26	22	25	20	17	18	14	12	11	9	8
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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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	3.1
50°-60°	153.7	3.0
60°-70°	134.3	2.6
70°-80°	103.3	2.0
80°-90°	72.9	1.4
90°-100°	283.1	5.5
100°-110°	830.3	16.1
110°-120°	859.2	16.6
120°-130°	700.4	13.5
130°-140°	557.9	10.8
140°-150°	418.3	8.1
150°-160°	293.4	5.7
160°-170°	172.8	3.3
170°-180°	56.2	1.1
0°-30°	228.3	4.4
0°-40°	375.5	7.3
0°-60°	687.5	13.3
0°-90°	998.0	19.3
90°-120°	1972.6	38.2
90°-150°	3649.3	70.6
90°-180°	4172.0	80.7
0°-180°	5169.7	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	44	94	109	115	6
95°	42	119	486	230	197	43
105°	138	220	864	1530	1314	147
115°	242	309	718	1467	1698	240
125°	336	397	680	1183	1373	299
135°	393	469	662	986	1130	304
145°	449	516	654	815	893	282
155°	510	551	635	718	747	235
165°	556	573	608	645	655	157
175°	579	580	585	592	590	55
180°	580	580	580	580	580	

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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°	5.4	44.0	94.1	109.4	115.0
92.5°	20.5	79.4	224.2	148.2	142.1
95°	42.5	119.4	486.5	230.2	197.4
97.5°	61.0	148.0	759.2	393.1	279.9
100°	89.0	173.8	924.3	718.4	462.5
102.5°	114.2	197.4	926.9	1171.0	838.6
105°	138.3	219.9	863.7	1529.9	1314.1
107.5°	165.1	242.2	804.9	1657.6	1633.3
110°	191.5	265.2	764.4	1633.0	1761.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	216.0	287.6	736.9	1558.1	1756.4
115°	241.7	309.4	717.6	1466.6	1698.3
117.5°	268.1	331.7	705.6	1379.3	1612.3
120°	292.6	353.5	695.3	1300.5	1530.1
122.5°	316.1	376.2	688.3	1239.0	1443.6
125°	335.8	397.2	679.8	1182.9	1372.6
127.5°	352.5	417.3	673.8	1134.3	1305.6
130°	367.0	435.8	669.1	1085.6	1249.8
132.5°	380.4	453.6	665.4	1035.1	1192.1
135°	393.3	469.2	662.2	985.8	1129.9
137.5°	405.6	482.6	660.1	936.0	1069.6
140°	420.1	494.5	657.3	891.8	1007.0
142.5°	434.6	504.6	656.4	849.6	944.9
145°	448.7	515.7	654.1	814.7	893.2
147.5°	464.4	524.6	650.8	784.0	846.7
150°	480.0	533.6	647.4	759.0	807.0
152.5°	495.6	542.5	641.8	738.4	774.7
155°	510.1	550.8	635.1	718.3	746.8
157.5°	522.4	557.6	628.4	699.3	722.2
160°	534.7	564.2	621.8	680.3	698.8
162.5°	547.0	569.3	616.2	662.5	676.4
165°	555.9	572.6	608.4	645.2	655.2
167.5°	563.7	576.0	601.7	629.6	635.1
170°	571.5	577.6	596.1	615.0	617.3
172.5°	576.0	579.4	589.4	602.2	602.8
175°	579.3	579.9	584.9	592.2	590.5
177.5°	581.6	580.5	580.5	584.9	581.6
180°	580.5	580.5	580.5	580.5	580.5

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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	6.62	7.27	7.79	8.44	10.09	9.69	10.35	10.87	11.51	13.16
	3H	8.07	8.65	9.25	9.83	11.49	12.27	12.86	13.45	14.03	15.69
	4H	8.53	9.09	9.72	10.27	11.93	13.51	14.08	14.71	15.25	16.91
	6H	8.81	9.32	10.01	10.50	12.18	14.80	15.32	16.00	16.49	18.17
	8H	8.86	9.35	10.06	10.54	12.21	15.45	15.95	16.65	17.13	18.80
	12H	8.87	9.34	10.07	10.52	12.21	16.17	16.64	17.38	17.82	19.51
4H	2H	7.65	8.21	8.85	9.38	11.05	10.00	10.56	11.20	11.73	13.40
	3H	9.34	9.81	10.54	11.01	12.69	12.78	13.25	13.98	14.44	16.12
	4H	9.95	10.39	11.16	11.57	13.27	14.19	14.62	15.39	15.81	17.50
	6H	10.36	10.73	11.57	11.94	13.62	15.64	16.02	16.85	17.22	18.91
	8H	10.46	10.81	11.67	12.01	13.71	16.39	16.75	17.60	17.94	19.64
	12H	10.49	10.81	11.72	12.02	13.73	17.21	17.53	18.43	18.74	20.45
8H	4H	10.73	11.08	11.93	12.27	13.98	14.31	14.66	15.52	15.86	17.56
	6H	11.35	11.64	12.58	12.88	14.58	15.93	16.23	17.16	17.46	19.16
	8H	11.57	11.82	12.80	13.04	14.76	16.82	17.08	18.05	18.29	20.01
	12H	11.69	11.92	12.93	13.13	14.88	17.81	18.03	19.04	19.24	20.99
12H	4H	10.91	11.23	12.14	12.44	14.15	14.28	14.60	15.50	15.80	17.51
	6H	11.68	11.94	12.91	13.15	14.87	15.96	16.21	17.19	17.43	19.14
	8H	11.98	12.20	13.21	13.41	15.16	16.88	17.10	18.11	18.31	20.06