

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: P998109

Luminaire Tested: SA2XXDIP-B290D1080UB30-4F0-XX-W2A-D1

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998109
REPORT IS A COMBINATION OF REPORTS P983846 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB30-4F0-XX-W2A-D1
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

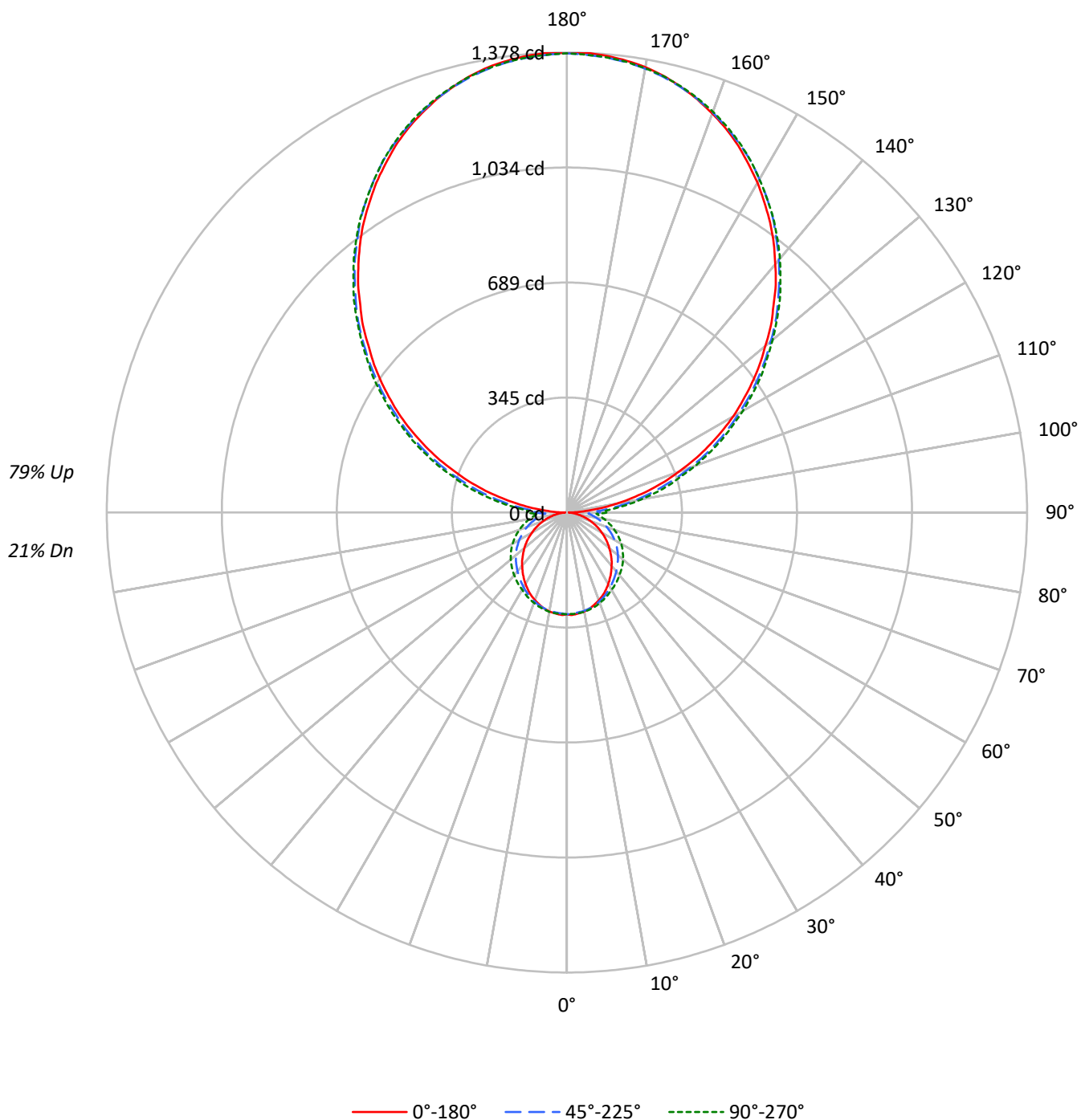
Lumens per Lamp: N/A
Luminaire Lumens: 5013.9 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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	89	89	89	89	67	67	67	47	47	47	29	29	29
1	91	86	82	79	80	76	73	70	58	55	53	41	39	38	25	24	23
2	82	75	69	64	72	66	61	57	50	47	44	35	33	31	21	20	19
3	75	65	58	53	66	58	52	47	44	40	36	31	28	26	19	17	16
4	68	58	50	44	60	51	45	40	39	34	31	27	24	22	17	15	14
5	62	51	43	37	55	45	39	34	34	30	26	24	21	19	15	13	12
6	57	46	38	32	50	40	34	29	31	26	23	22	19	16	13	12	10
7	53	41	33	28	46	36	30	25	28	23	20	20	17	14	12	10	9
8	49	37	29	24	43	33	26	22	25	20	17	18	15	13	11	9	8
9	45	33	26	21	40	30	24	19	23	18	15	16	13	11	10	8	7
10	42	31	24	19	37	27	21	17	21	17	13	15	12	10	9	8	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	0.6
10°-20°	82.9	1.7
20°-30°	125.7	2.5
30°-40°	153.0	3.1
40°-50°	164.7	3.3
50°-60°	159.9	3.2
60°-70°	139.6	2.8
70°-80°	107.5	2.1
80°-90°	75.9	1.5
90°-100°	134.7	2.7
100°-110°	306.8	6.1
110°-120°	486.9	9.7
120°-130°	622.1	12.4
130°-140°	689.0	13.7
140°-150°	671.1	13.4
150°-160°	562.1	11.2
160°-170°	372.8	7.4
170°-180°	130.3	2.6
0°-30°	237.5	4.7
0°-40°	390.6	7.8
0°-60°	715.1	14.3
0°-90°	1038.1	20.7
90°-120°	928.4	18.5
90°-150°	2910.6	58.0
90°-180°	3976.0	79.3
0°-180°	5013.9	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	45	99	114	121	7
95°	64	96	125	142	145	70
105°	252	268	293	311	316	266
115°	466	478	496	508	509	461
125°	676	687	698	706	709	605
135°	875	887	894	902	902	676
145°	1061	1069	1076	1080	1078	663
155°	1213	1217	1220	1226	1222	558
165°	1320	1319	1319	1327	1321	372
175°	1373	1370	1368	1376	1369	130
180°	1376	1376	1376	1376	1376	

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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°	5.6	45.2	99.0	114.3	120.8
92.5°	29.5	62.2	90.4	108.7	114.0
95°	63.9	96.3	125.1	141.9	144.9
97.5°	104.1	133.5	163.8	180.2	185.5
100°	150.5	176.2	204.4	220.8	224.4
102.5°	198.9	220.4	248.9	266.0	269.7
105°	251.8	268.1	293.4	311.2	316.1
107.5°	305.2	320.4	342.5	358.8	357.8
110°	355.9	371.6	393.3	407.4	408.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	411.6	425.6	444.8	455.4	458.0
115°	466.2	477.9	495.5	507.6	509.1
117.5°	520.2	533.1	545.8	555.6	556.5
120°	574.8	585.9	594.3	606.7	608.0
122.5°	624.7	636.8	647.3	655.8	657.4
125°	676.5	687.0	697.6	706.1	708.9
127.5°	727.6	739.9	747.2	753.6	754.1
130°	775.2	789.8	796.8	805.1	804.0
132.5°	828.6	839.7	847.6	851.9	852.0
135°	874.6	887.3	894.1	902.2	902.3
137.5°	925.6	936.1	940.7	947.9	946.3
140°	970.9	981.0	987.7	994.8	992.7
142.5°	1017.3	1027.4	1030.9	1037.3	1034.9
145°	1061.1	1069.2	1076.1	1080.0	1077.6
147.5°	1100.5	1111.0	1115.6	1118.3	1115.1
150°	1141.2	1148.1	1152.8	1156.3	1152.8
152.5°	1177.1	1184.1	1189.9	1194.6	1189.9
155°	1213.1	1216.6	1220.1	1225.9	1222.4
157.5°	1244.5	1246.8	1249.1	1257.2	1251.4
160°	1272.3	1274.7	1275.8	1282.8	1278.1
162.5°	1297.9	1297.9	1299.0	1307.2	1301.4
165°	1319.9	1318.8	1318.8	1326.9	1321.1
167.5°	1339.7	1336.2	1336.2	1344.3	1338.5
170°	1354.8	1351.3	1350.1	1358.2	1351.3
172.5°	1365.2	1361.7	1360.6	1368.7	1361.7
175°	1373.3	1369.9	1367.5	1375.7	1368.7
177.5°	1378.0	1374.5	1372.2	1379.1	1372.2
180°	1375.7	1375.7	1375.7	1375.7	1375.7

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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	7.02	7.69	8.19	8.84	10.48	10.10	10.77	11.27	11.92	13.56
	3H	8.47	9.07	9.65	10.23	11.88	12.68	13.27	13.85	14.44	16.09
	4H	8.94	9.51	10.12	10.67	12.32	13.92	14.49	15.10	15.65	17.31
	6H	9.21	9.74	10.40	10.90	12.57	15.21	15.73	16.40	16.90	18.56
	8H	9.27	9.77	10.46	10.95	12.60	15.86	16.36	17.05	17.54	19.20
	12H	9.28	9.75	10.47	10.93	12.60	16.58	17.06	17.78	18.23	19.91
4H	2H	8.05	8.62	9.24	9.79	11.44	10.41	10.98	11.60	12.14	13.80
	3H	9.75	10.22	10.94	11.41	13.08	13.18	13.66	14.38	14.85	16.52
	4H	10.36	10.80	11.56	11.98	13.66	14.59	15.04	15.79	16.21	17.90
	6H	10.76	11.15	11.96	12.35	14.01	16.05	16.43	17.25	17.63	19.30
	8H	10.87	11.22	12.07	12.41	14.10	16.80	17.16	18.00	18.35	20.04
	12H	10.90	11.23	12.12	12.43	14.12	17.62	17.95	18.84	19.15	20.84
8H	4H	11.13	11.49	12.33	12.68	14.37	14.72	15.08	15.92	16.27	17.96
	6H	11.76	12.06	12.98	13.29	14.97	16.34	16.64	17.56	17.87	19.56
	8H	11.98	12.24	13.20	13.45	15.15	17.23	17.49	18.45	18.70	20.40
	12H	12.10	12.33	13.33	13.54	15.27	18.21	18.44	19.44	19.65	21.38
12H	4H	11.32	11.65	12.54	12.85	14.54	14.69	15.01	15.90	16.21	17.90
	6H	12.09	12.35	13.31	13.56	15.26	16.37	16.62	17.59	17.83	19.54
	8H	12.38	12.61	13.61	13.82	15.55	17.28	17.51	18.51	18.72	20.45