

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: P998113

Luminaire Tested: SA2XXDIP-B290D1080UB30-4F0-XX-W2A-F4

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998113
REPORT IS A COMBINATION OF REPORTS P983850 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-F4
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

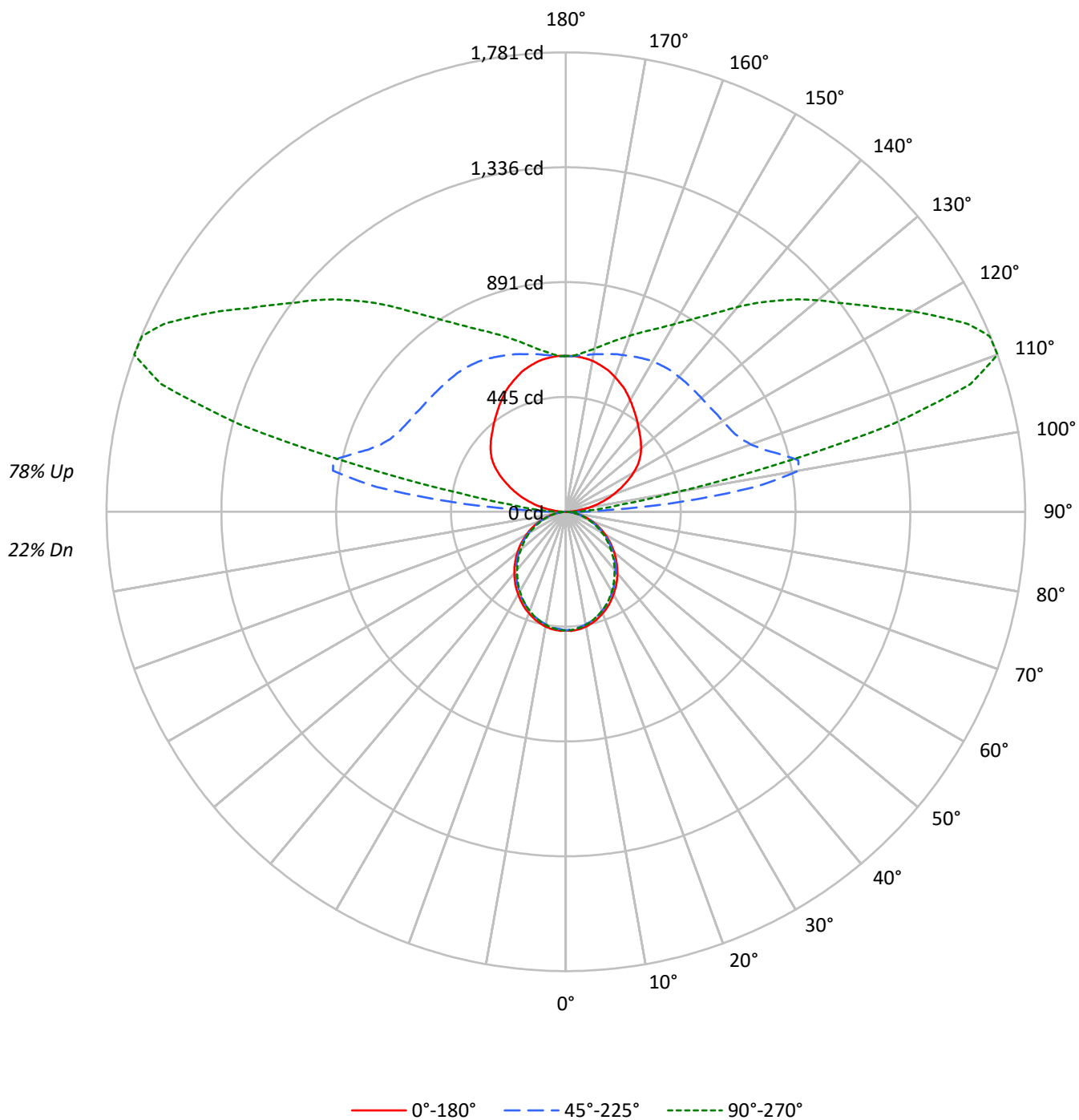
Lumens per Lamp: N/A
Luminaire Lumens: 5382.8 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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
RCR																	
0	100	100	100	100	89	89	89	89	68	68	68	48	48	48	30	30	30
1	91	87	84	80	81	77	74	72	59	57	55	42	41	40	27	26	25
2	83	76	70	65	73	68	63	59	52	48	46	37	35	33	23	22	21
3	76	67	60	54	67	59	54	49	46	42	38	33	30	28	21	19	18
4	69	59	52	46	61	53	46	41	40	36	33	29	26	24	19	17	16
5	63	52	45	39	56	47	40	35	36	31	28	26	23	21	17	15	14
6	58	47	39	34	51	42	35	30	32	28	24	23	20	18	15	13	12
7	54	42	35	29	47	38	31	26	29	24	21	21	18	16	14	12	11
8	50	38	31	26	44	34	28	23	26	22	19	19	16	14	13	11	9
9	46	35	27	23	41	31	25	21	24	20	16	18	15	12	12	10	8
10	43	32	25	20	38	28	22	18	22	18	15	16	13	11	11	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7280	7280	7280
5°	7292	6938	6890
10°	7232	6622	6491
15°	7127	6304	6072
20°	6983	5958	5675
25°	6840	5595	5278
30°	6661	5255	4863
35°	6491	4896	4455
40°	6282	4542	4069
45°	6074	4191	3690
50°	5847	3833	3296
55°	5609	3451	2925
60°	5341	3037	2537
65°	5044	2618	2132
70°	4673	2156	1721
75°	4156	1663	1328
80°	3529	1131	856
85°	2557	524	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6074 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	0.8
10°-20°	121.8	2.3
20°-30°	179.0	3.3
30°-40°	207.9	3.9
40°-50°	207.6	3.9
50°-60°	181.0	3.4
60°-70°	133.8	2.5
70°-80°	75.7	1.4
80°-90°	23.8	0.4
90°-100°	244.7	4.5
100°-110°	827.3	15.4
110°-120°	869.6	16.2
120°-130°	715.1	13.3
130°-140°	574.7	10.7
140°-150°	434.1	8.1
150°-160°	305.2	5.7
160°-170°	179.7	3.3
170°-180°	58.5	1.1
0°-30°	344.0	6.4
0°-40°	551.9	10.3
0°-60°	940.5	17.5
0°-90°	1173.9	21.8
90°-120°	1941.7	36.1
90°-150°	3665.6	68.1
90°-180°	4209.0	78.2
0°-180°	5382.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	460	458	453	457	456	44
15°	438	435	429	431	429	123
25°	396	393	385	386	385	182
35°	342	337	330	328	326	213
45°	278	275	268	264	262	215
55°	210	208	202	197	195	188
65°	142	139	135	131	129	140
75°	74	73	71	68	69	79
85°	18	18	17	16	16	20
90°	1	16	40	38	38	4
95°	41	100	455	172	132	42
105°	142	214	860	1538	1308	150
115°	250	315	720	1485	1722	248
125°	348	412	692	1203	1397	310
135°	409	488	684	1011	1158	316
145°	467	536	680	845	924	293
155°	531	573	661	747	777	244
165°	578	596	633	671	682	163
175°	602	603	608	616	614	57
180°	604	604	604	604	604	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	459.9	459.9	459.9	459.9	459.9
2.5°	462.5	460.3	455.5	459.9	459.0
5°	459.9	458.1	453.2	456.8	455.9
7.5°	456.8	454.1	449.3	452.8	451.9
10°	451.9	448.8	443.5	447.1	445.7
12.5°	445.3	442.6	437.3	439.5	438.7
15°	437.8	435.1	429.4	431.1	428.9
17.5°	428.5	425.8	420.1	422.3	420.1
20°	418.3	415.7	409.5	410.8	409.0
22.5°	408.1	404.2	398.4	398.4	397.5
25°	396.2	392.7	385.1	386.0	385.1
27.5°	382.9	379.8	374.1	372.8	370.6
30°	369.7	366.1	359.5	358.2	356.4
32.5°	355.5	352.9	345.8	343.1	341.4
35°	341.8	337.4	330.3	327.7	325.5
37.5°	326.3	322.4	315.3	312.2	310.0
40°	310.4	306.9	299.8	295.8	294.1
42.5°	294.9	291.4	284.3	279.9	277.3
45°	278.1	275.0	268.4	263.5	261.8
47.5°	261.8	258.7	251.6	246.7	244.1
50°	244.5	242.3	236.1	229.9	227.7
52.5°	227.7	224.6	218.9	214.0	210.9
55°	210.5	207.8	202.5	197.2	195.0
57.5°	193.2	191.0	185.3	180.0	178.2
60°	176.0	174.2	168.0	163.2	161.8
62.5°	159.2	156.1	151.7	147.2	145.5
65°	141.9	139.3	134.9	130.9	128.7
67.5°	124.3	122.0	118.1	115.0	113.2
70°	107.9	106.1	102.1	99.1	97.3
72.5°	91.1	89.3	87.1	84.0	82.7
75°	74.3	73.4	71.2	68.5	69.4
77.5°	59.3	57.5	56.6	55.3	53.9
80°	44.2	43.8	42.9	41.6	40.7
82.5°	30.1	30.1	29.6	27.9	27.9
85°	18.1	17.7	17.2	15.9	15.5
87.5°	8.0	7.1	6.2	4.9	4.4
90°	1.2	15.6	39.5	37.8	38.3
92.5°	17.4	55.2	178.8	82.4	70.8
95°	40.6	99.8	455.1	171.8	132.3
97.5°	60.4	131.8	741.8	344.8	221.7
100°	89.4	161.4	917.1	686.7	415.6
102.5°	116.1	188.0	923.0	1161.0	810.3
105°	141.6	213.6	860.3	1537.6	1308.4
107.5°	169.5	239.2	802.2	1674.1	1643.9
110°	197.4	265.2	762.7	1652.0	1780.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	222.9	290.2	737.2	1577.1	1778.6
115°	249.6	315.2	719.8	1485.4	1721.7
117.5°	277.5	340.2	710.5	1397.8	1635.8
120°	303.0	364.6	702.4	1319.4	1553.3
122.5°	327.4	389.5	697.7	1258.4	1467.4
125°	348.3	412.2	691.9	1203.4	1396.6
127.5°	365.7	433.6	688.4	1156.3	1330.4
130°	380.8	452.8	686.1	1108.7	1275.9
132.5°	394.7	471.4	685.0	1059.4	1219.0
135°	408.7	487.6	683.8	1011.2	1157.5
137.5°	421.4	501.5	683.8	962.4	1098.3
140°	436.5	514.3	682.6	919.4	1036.7
142.5°	451.6	524.8	682.6	878.2	975.2
145°	466.7	536.4	680.3	844.6	924.1
147.5°	483.0	545.6	676.8	815.0	878.8
150°	499.2	555.0	673.3	789.4	839.4
152.5°	515.5	564.2	667.5	768.0	805.7
155°	530.6	572.9	660.6	747.1	776.7
157.5°	543.3	579.8	653.6	727.4	751.1
160°	556.1	586.8	646.6	707.6	726.8
162.5°	568.9	592.0	640.8	689.0	703.5
165°	578.2	595.6	632.7	671.0	681.5
167.5°	586.3	599.0	625.7	654.8	660.6
170°	594.4	600.8	619.9	639.6	642.0
172.5°	599.0	602.6	613.0	626.3	626.9
175°	602.5	603.1	608.3	615.9	614.1
177.5°	604.9	603.7	603.7	608.3	604.9
180°	603.7	603.7	603.7	603.7	603.7

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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	8.64	9.29	9.81	10.45	12.07	9.42	10.08	10.59	11.23	12.85
	3H	9.96	10.55	11.14	11.71	13.35	11.03	11.62	12.21	12.78	14.42
	4H	10.36	10.91	11.54	12.07	13.72	11.62	12.17	12.80	13.33	14.97
	6H	10.57	11.08	11.75	12.24	13.89	12.01	12.52	13.20	13.68	15.34
	8H	10.59	11.08	11.78	12.25	13.90	12.11	12.60	13.30	13.77	15.42
	12H	10.57	11.04	11.77	12.21	13.87	12.15	12.61	13.34	13.78	15.45
4H	2H	9.08	9.64	10.27	10.80	12.44	9.73	10.29	10.92	11.45	13.09
	3H	10.58	11.05	11.78	12.23	13.89	11.49	11.95	12.68	13.14	14.79
	4H	11.08	11.51	12.27	12.68	14.35	12.16	12.59	13.36	13.76	15.44
	6H	11.37	11.74	12.57	12.93	14.59	12.65	13.01	13.84	14.21	15.87
	8H	11.42	11.76	12.62	12.95	14.63	12.78	13.13	13.98	14.31	15.99
	12H	11.41	11.72	12.63	12.92	14.60	12.84	13.15	14.05	14.34	16.03
8H	4H	11.24	11.58	12.43	12.77	14.44	12.23	12.57	13.43	13.76	15.44
	6H	11.61	11.89	12.83	13.12	14.80	12.79	13.07	14.01	14.30	15.98
	8H	11.71	11.96	12.93	13.16	14.86	12.98	13.22	14.20	14.43	16.12
	12H	11.74	11.95	12.96	13.15	14.88	13.07	13.28	14.29	14.49	16.21
12H	4H	11.21	11.52	12.42	12.72	14.40	12.18	12.49	13.40	13.69	15.37
	6H	11.63	11.87	12.85	13.08	14.78	12.78	13.03	14.00	14.23	15.93
	8H	11.73	11.95	12.96	13.15	14.88	12.97	13.18	14.19	14.39	16.11