

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: P998088

Luminaire Tested: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998088
REPORT IS A COMBINATION OF REPORTS P983825 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1
Description: Define 2 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

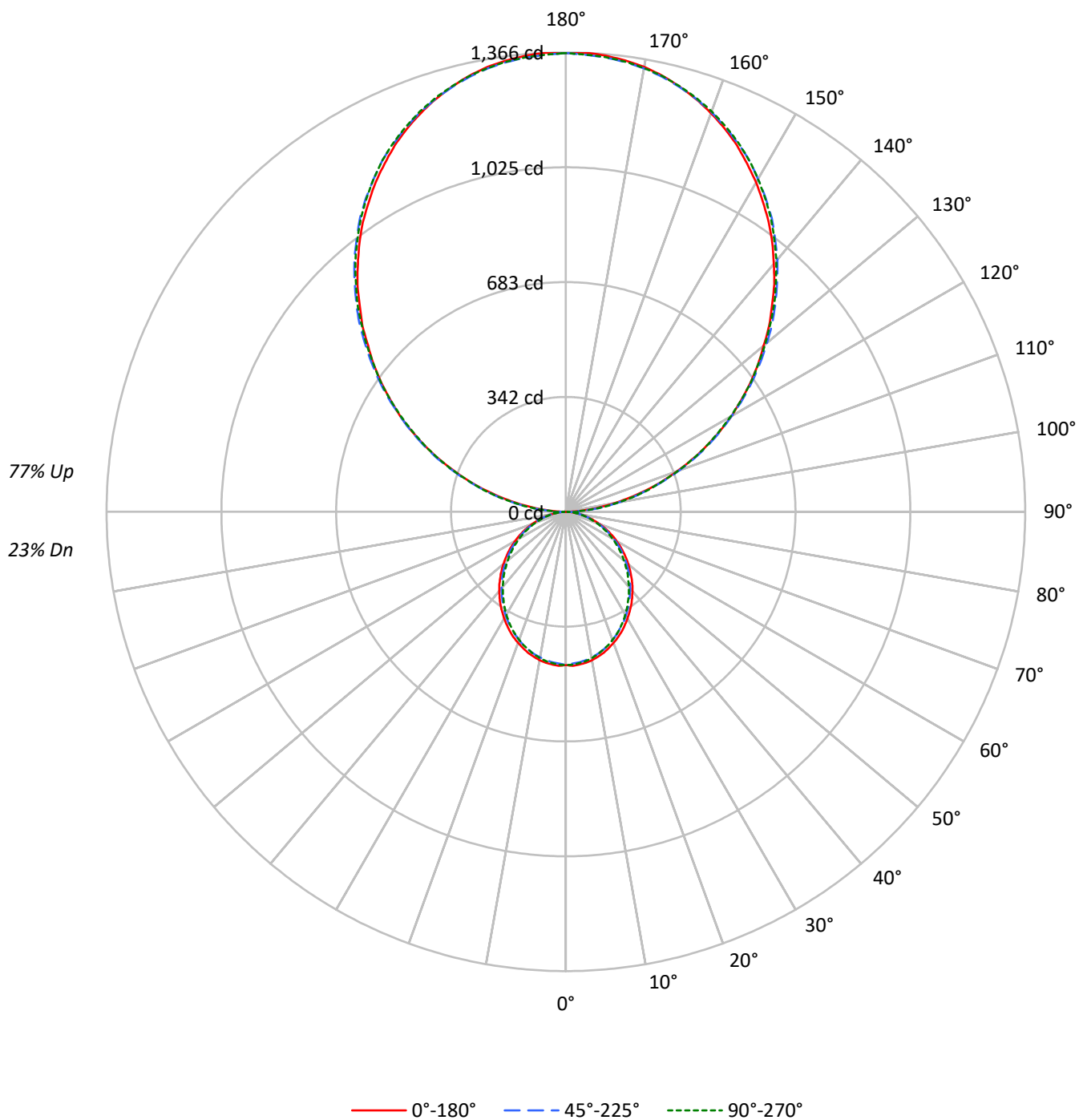
Lumens per Lamp: N/A
Luminaire Lumens: 4977.0 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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

TEST NUMBER: P998088

CATALOG NUMBER: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1

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	101	101	101	101	90	90	90	90	69	69	69	49	49	49	32	32	32
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27
2	84	76	71	66	74	68	63	59	52	49	46	38	36	34	25	23	22
3	76	67	60	55	67	60	54	49	46	42	39	34	31	29	22	20	19
4	70	59	52	46	62	53	47	42	41	36	33	30	27	25	19	18	16
5	64	53	45	39	56	47	40	35	36	32	28	27	24	21	17	16	14
6	59	47	39	34	52	42	35	31	33	28	24	24	21	18	16	14	12
7	54	42	35	29	48	38	31	27	30	25	21	22	19	16	14	13	11
8	50	38	31	26	44	34	28	23	27	22	19	20	17	14	13	11	10
9	46	35	28	23	41	31	25	21	24	20	17	18	15	13	12	10	9
10	43	32	25	20	38	29	22	18	22	18	15	17	14	11	11	9	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7217	7217	7217
5°	7228	6880	6831
10°	7171	6566	6435
15°	7065	6250	6021
20°	6923	5907	5626
25°	6781	5548	5234
30°	6604	5210	4822
35°	6436	4855	4417
40°	6230	4503	4033
45°	6023	4155	3658
50°	5797	3801	3269
55°	5561	3422	2899
60°	5295	3012	2517
65°	5002	2595	2113
70°	4634	2139	1707
75°	4123	1649	1317
80°	3497	1120	847
85°	2543	521	360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6023 cd/sqm

TEST NUMBER: P998088

CATALOG NUMBER: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	0.9
10°-20°	120.7	2.4
20°-30°	177.4	3.6
30°-40°	206.1	4.1
40°-50°	205.8	4.1
50°-60°	179.5	3.6
60°-70°	132.7	2.7
70°-80°	75.1	1.5
80°-90°	23.7	0.5
90°-100°	84.4	1.7
100°-110°	268.2	5.4
110°-120°	458.9	9.2
120°-130°	603.6	12.1
130°-140°	677.5	13.6
140°-150°	664.4	13.3
150°-160°	557.3	11.2
160°-170°	369.6	7.4
170°-180°	129.2	2.6
0°-30°	341.1	6.9
0°-40°	547.2	11.0
0°-60°	932.5	18.7
0°-90°	1163.9	23.4
90°-120°	811.5	16.3
90°-150°	2757.0	55.4
90°-180°	3813.0	76.6
0°-180°	4977.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	456	454	449	453	452	43
15°	434	431	426	427	425	122
25°	393	389	382	383	382	181
35°	339	334	328	325	323	212
45°	276	273	266	261	260	213
55°	209	206	201	196	193	187
65°	141	138	134	130	128	139
75°	74	73	71	68	69	79
85°	18	18	17	16	15	20
90°	1	15	40	38	39	5
95°	60	71	74	74	71	67
105°	248	251	253	256	256	261
115°	460	467	465	464	460	455
125°	670	680	677	673	672	599
135°	867	879	882	880	877	670
145°	1052	1060	1067	1068	1064	657
155°	1203	1206	1210	1215	1212	554
165°	1309	1308	1308	1316	1310	369
175°	1362	1358	1356	1364	1357	129
180°	1364	1364	1364	1364	1364	

TEST NUMBER: P998088

CATALOG NUMBER: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	455.9	455.9	455.9	455.9	455.9
2.5°	458.6	456.4	451.6	455.9	455.1
5°	455.9	454.2	449.4	452.9	452.0
7.5°	452.9	450.2	445.4	448.9	448.1
10°	448.1	445.0	439.7	443.2	441.9
12.5°	441.5	438.8	433.6	435.8	434.9
15°	434.0	431.4	425.7	427.4	425.3
17.5°	424.8	422.2	416.5	418.7	416.5
20°	414.7	412.1	406.0	407.3	405.5
22.5°	404.7	400.7	395.0	395.0	394.1
25°	392.8	389.3	381.9	382.7	381.9
27.5°	379.7	376.6	370.9	369.6	367.4
30°	366.5	363.0	356.4	355.1	353.4
32.5°	352.5	349.9	342.8	340.2	338.5
35°	338.9	334.5	327.5	324.9	322.7
37.5°	323.5	319.6	312.6	309.5	307.3
40°	307.8	304.3	297.2	293.3	291.5
42.5°	292.4	288.9	281.9	277.5	274.9
45°	275.8	272.7	266.1	261.3	259.5
47.5°	259.5	256.5	249.5	244.6	242.0
50°	242.4	240.2	234.1	228.0	225.8
52.5°	225.8	222.7	217.0	212.2	209.1
55°	208.7	206.1	200.8	195.5	193.3
57.5°	191.6	189.4	183.7	178.4	176.7
60°	174.5	172.7	166.6	161.8	160.5
62.5°	157.8	154.8	150.4	146.0	144.2
65°	140.7	138.1	133.7	129.8	127.6
67.5°	123.2	121.0	117.1	114.0	112.2
70°	107.0	105.2	101.3	98.2	96.5
72.5°	90.3	88.6	86.4	83.3	82.0
75°	73.7	72.8	70.6	68.0	68.8
77.5°	58.7	57.0	56.1	54.8	53.5
80°	43.8	43.4	42.5	41.2	40.3
82.5°	29.8	29.8	29.4	27.6	27.6
85°	18.0	17.5	17.1	15.8	15.3
87.5°	7.9	7.0	6.1	4.8	4.4
90°	1.2	15.0	40.3	38.0	39.1
92.5°	25.3	34.5	35.7	36.8	36.8
95°	59.8	71.4	73.7	73.7	71.4
97.5°	100.1	110.5	115.1	115.1	115.1
100°	146.2	155.4	158.8	158.8	157.7
102.5°	194.5	201.4	206.0	207.2	206.0
105°	247.5	250.9	253.2	255.5	255.5
107.5°	300.4	305.0	305.0	306.2	300.4
110°	351.0	357.9	357.9	357.9	354.5

TEST NUMBER: P998088

CATALOG NUMBER: SA2XXDIP-B290D1080UB27-4F0-XX-W2A-F1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	406.3	413.2	412.0	408.6	406.3
115°	460.4	467.3	465.0	463.8	460.4
117.5°	514.5	523.7	517.9	514.5	511.0
120°	568.6	577.8	568.6	568.6	565.1
122.5°	618.1	629.6	623.8	620.4	618.1
125°	669.8	680.2	676.8	673.3	672.2
127.5°	720.5	733.2	728.5	723.9	720.5
130°	767.7	782.6	780.3	778.0	773.4
132.5°	820.6	832.1	833.3	827.5	824.1
135°	866.7	879.3	881.6	880.5	877.0
137.5°	917.3	927.7	930.0	928.8	924.2
140°	962.2	972.5	978.3	978.3	973.7
142.5°	1008.2	1018.6	1022.0	1023.2	1018.6
145°	1052.0	1060.0	1066.9	1068.1	1063.5
147.5°	1091.1	1101.5	1106.1	1108.4	1103.8
150°	1131.4	1138.3	1142.9	1146.3	1142.9
152.5°	1167.1	1174.0	1179.7	1184.3	1179.7
155°	1202.7	1206.2	1209.6	1215.4	1211.9
157.5°	1233.8	1236.1	1238.4	1246.5	1240.7
160°	1261.4	1263.7	1264.9	1271.8	1267.2
162.5°	1286.8	1286.8	1287.9	1296.0	1290.2
165°	1308.6	1307.5	1307.5	1315.5	1309.8
167.5°	1328.2	1324.7	1324.7	1332.8	1327.0
170°	1343.2	1339.7	1338.5	1346.6	1339.7
172.5°	1353.5	1350.1	1348.9	1357.0	1350.1
175°	1361.6	1358.1	1355.8	1363.9	1357.0
177.5°	1366.2	1362.7	1360.4	1367.3	1360.4
180°	1363.9	1363.9	1363.9	1363.9	1363.9

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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	8.88	9.55	10.04	10.69	12.30	9.67	10.33	10.82	11.47	13.08
	3H	10.21	10.80	11.37	11.95	13.57	11.28	11.87	12.44	13.02	14.64
	4H	10.60	11.17	11.78	12.32	13.95	11.86	12.42	13.03	13.58	15.20
	6H	10.81	11.33	11.99	12.48	14.12	12.25	12.77	13.43	13.93	15.56
	8H	10.84	11.33	12.02	12.50	14.13	12.35	12.85	13.54	14.02	15.65
	12H	10.82	11.29	12.01	12.45	14.10	12.39	12.86	13.58	14.02	15.68
4H	2H	9.33	9.89	10.51	11.05	12.67	9.97	10.54	11.15	11.69	13.31
	3H	10.83	11.30	12.01	12.48	14.11	11.73	12.21	12.92	13.38	15.02
	4H	11.33	11.76	12.51	12.93	14.58	12.41	12.84	13.59	14.01	15.66
	6H	11.62	11.99	12.81	13.18	14.82	12.89	13.26	14.08	14.45	16.10
	8H	11.67	12.02	12.86	13.19	14.86	13.03	13.38	14.22	14.56	16.22
	12H	11.66	11.97	12.86	13.16	14.83	13.08	13.40	14.29	14.59	16.25
8H	4H	11.48	11.83	12.67	13.01	14.67	12.48	12.82	13.67	14.00	15.67
	6H	11.86	12.15	13.07	13.37	15.03	13.04	13.32	14.25	14.54	16.20
	8H	11.96	12.21	13.17	13.41	15.09	13.22	13.47	14.44	14.67	16.35
	12H	11.98	12.20	13.20	13.40	15.11	13.31	13.53	14.53	14.73	16.44
12H	4H	11.46	11.77	12.66	12.96	14.63	12.43	12.75	13.64	13.94	15.60
	6H	11.88	12.13	13.09	13.32	15.00	13.03	13.28	14.24	14.47	16.15
	8H	11.98	12.20	13.20	13.39	15.10	13.21	13.43	14.43	14.63	16.34