

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: P998084

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

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998084
REPORT IS A COMBINATION OF REPORTS P983821 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-D
Description: Define 2 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

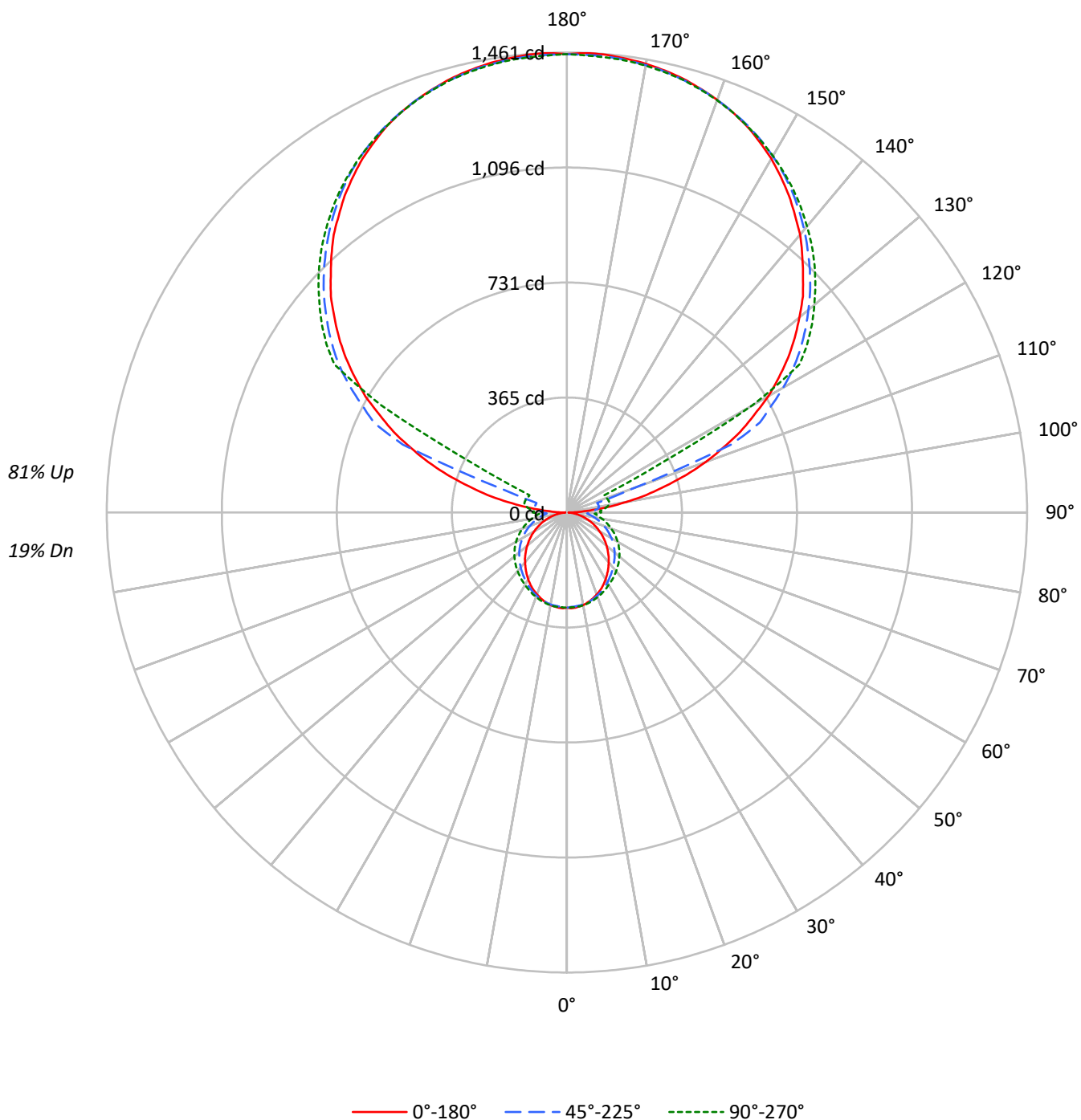
Lumens per Lamp: N/A
Luminaire Lumens: 5424.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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

TEST NUMBER: P998084

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

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					0
RW	70	50	30	10	70	50	30	10	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	19		
1	90	86	82	78	79	76	73	70	57	55	53	39	38	37	23	23	22	15		
2	82	75	69	63	72	66	61	57	49	46	43	34	32	30	20	19	18	12		
3	74	65	58	52	65	58	52	47	43	39	36	30	28	25	18	16	15	10		
4	68	57	50	44	60	51	44	39	38	34	30	27	24	21	16	14	13	8		
5	62	51	43	37	54	45	38	33	34	29	26	24	21	18	14	12	11	7		
6	57	45	38	32	50	40	34	29	30	26	22	21	18	16	13	11	10	6		
7	53	41	33	28	46	36	30	25	27	23	19	19	16	14	12	10	8	5		
8	49	37	29	24	43	33	26	22	25	20	17	17	14	12	11	9	7	5		
9	45	33	26	21	40	30	23	19	23	18	15	16	13	11	10	8	7	4		
10	42	30	23	19	37	27	21	17	21	16	13	15	12	10	9	7	6	4		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4787	4787	4787
5°	4809	4584	4558
10°	4777	4424	4360
15°	4709	4261	4158
20°	4624	4088	3965
25°	4541	3923	3791
30°	4423	3755	3618
35°	4303	3593	3491
40°	4177	3453	3366
45°	4058	3326	3256
50°	3931	3210	3147
55°	3797	3085	3037
60°	3632	2956	2921
65°	3459	2806	2787
70°	3265	2648	2645
75°	3015	2488	2509
80°	2627	2322	2367
85°	2232	2165	2248

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 4058 cd/sqm

TEST NUMBER: P998084

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.7	0.5
10°-20°	82.2	1.5
20°-30°	124.6	2.3
30°-40°	151.7	2.8
40°-50°	163.2	3.0
50°-60°	158.5	2.9
60°-70°	138.4	2.6
70°-80°	106.6	2.0
80°-90°	73.9	1.4
90°-100°	97.2	1.8
100°-110°	214.9	4.0
110°-120°	498.3	9.2
120°-130°	800.3	14.8
130°-140°	841.6	15.5
140°-150°	778.0	14.3
150°-160°	624.7	11.5
160°-170°	402.5	7.4
170°-180°	138.5	2.6
0°-30°	235.5	4.3
0°-40°	387.2	7.1
0°-60°	709.0	13.1
0°-90°	1027.9	19.0
90°-120°	810.4	14.9
90°-150°	3230.3	59.6
90°-180°	4396.0	81.0
0°-180°	5424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	302	302	302	302	302	
5°	303	302	299	302	302	29
15°	289	290	290	294	294	81
25°	263	266	270	275	277	121
35°	227	234	242	252	255	142
45°	186	198	213	227	231	143
55°	142	158	181	197	202	127
65°	97	119	145	163	168	97
75°	54	78	106	125	131	57
85°	16	43	71	89	96	17
90°	6	42	79	102	109	7
95°	72	58	92	113	118	84
105°	322	367	102	129	138	345
115°	607	630	676	202	131	598
125°	857	871	905	924	931	765
135°	1060	1077	1091	1110	1112	819
145°	1229	1228	1246	1256	1253	769
155°	1354	1344	1357	1363	1354	624
165°	1426	1420	1423	1430	1423	403
175°	1459	1451	1454	1461	1450	139
180°	1456	1456	1456	1456	1456	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	302.4	302.4	302.4	302.4	302.4
2.5°	304.6	303.3	300.2	302.4	301.6
5°	303.3	302.0	299.4	302.0	301.6
7.5°	301.1	300.2	298.1	301.1	300.7
10°	298.5	297.6	296.3	299.8	299.4
12.5°	294.1	294.5	293.7	297.2	296.7
15°	289.3	290.2	290.2	294.1	293.7
17.5°	283.2	284.9	286.2	290.2	290.2
20°	277.0	279.2	281.0	285.8	285.8
22.5°	270.4	273.1	275.7	280.5	281.4
25°	263.0	266.1	270.0	275.3	276.6
27.5°	254.2	259.0	263.4	270.0	270.9
30°	245.5	251.2	256.9	263.9	265.2
32.5°	235.8	242.4	249.4	257.7	260.4
35°	226.6	234.1	242.4	252.0	255.1
37.5°	216.5	224.9	235.4	245.9	249.0
40°	206.4	216.1	227.9	239.3	243.3
42.5°	196.8	206.4	220.5	233.2	237.1
45°	185.8	197.7	213.0	226.6	231.0
47.5°	175.3	188.0	205.6	219.6	224.4
50°	164.4	178.0	197.7	212.6	217.4
52.5°	153.8	168.3	189.4	204.7	210.0
55°	142.5	158.2	181.0	196.8	202.5
57.5°	131.5	149.0	171.8	188.9	194.6
60°	119.7	138.5	163.5	180.1	186.3
62.5°	109.1	128.9	153.8	171.8	177.5
65°	97.3	118.8	144.6	162.6	168.3
67.5°	86.8	109.1	135.4	153.4	159.5
70°	75.4	98.2	125.4	144.2	149.5
72.5°	64.9	88.5	116.2	134.6	141.1
75°	53.9	78.5	106.5	125.4	131.1
77.5°	43.4	68.8	97.3	116.2	122.3
80°	32.9	59.6	88.1	106.5	112.6
82.5°	24.1	50.4	79.3	97.7	103.4
85°	15.8	43.0	71.0	89.4	95.6
87.5°	9.6	35.9	64.0	82.0	87.7
90°	5.5	42.4	79.0	101.7	109.1
92.5°	30.2	49.3	79.2	98.4	104.7
95°	72.0	57.8	91.5	113.4	117.6
97.5°	126.3	58.8	101.0	120.5	126.7
100°	189.5	61.4	103.8	128.5	135.5
102.5°	258.5	270.9	102.9	130.2	138.3
105°	322.4	366.7	102.0	128.8	137.9
107.5°	397.2	434.0	101.0	127.4	136.6
110°	468.4	499.2	216.3	125.0	134.0

TEST NUMBER: P998084

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	535.8	561.8	564.0	124.1	132.1
115°	607.4	630.1	676.2	201.6	130.7
117.5°	669.1	693.7	730.0	592.5	321.0
120°	738.6	756.2	792.7	817.6	680.2
122.5°	797.6	814.9	852.2	870.3	875.4
125°	857.2	870.9	904.9	924.1	931.3
127.5°	912.0	926.2	953.9	975.4	980.4
130°	963.6	980.0	1000.7	1022.9	1025.4
132.5°	1016.3	1029.5	1047.6	1067.2	1069.7
135°	1060.0	1076.9	1090.7	1110.5	1111.9
137.5°	1106.4	1119.0	1131.7	1150.7	1150.5
140°	1151.6	1159.7	1172.2	1188.6	1186.0
142.5°	1189.6	1196.5	1210.2	1224.0	1220.9
145°	1229.2	1228.1	1246.0	1256.0	1252.9
147.5°	1263.9	1260.8	1278.7	1284.4	1281.5
150°	1297.7	1290.3	1307.1	1313.5	1308.2
152.5°	1326.1	1317.7	1333.5	1339.8	1332.4
155°	1353.5	1344.0	1356.6	1363.0	1354.5
157.5°	1375.6	1367.2	1376.6	1384.0	1375.6
160°	1394.6	1388.2	1394.6	1400.9	1393.5
162.5°	1411.4	1405.1	1410.4	1417.7	1408.2
165°	1426.2	1419.8	1423.0	1430.4	1423.0
167.5°	1437.7	1431.4	1434.6	1442.0	1432.5
170°	1447.2	1440.9	1443.0	1450.4	1440.9
172.5°	1453.5	1447.2	1449.3	1456.7	1447.2
175°	1458.8	1451.4	1453.5	1460.9	1450.4
177.5°	1460.9	1453.5	1454.6	1462.0	1452.5
180°	1455.6	1455.6	1455.6	1455.6	1455.6

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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	6.66	7.31	7.84	8.48	10.13	9.73	10.39	10.91	11.55	13.21
	3H	8.11	8.69	9.29	9.87	11.53	12.31	12.90	13.50	14.07	15.74
	4H	8.57	9.13	9.77	10.30	11.98	13.55	14.11	14.75	15.29	16.96
	6H	8.85	9.36	10.05	10.54	12.22	14.84	15.36	16.04	16.53	18.21
	8H	8.90	9.39	10.10	10.58	12.25	15.49	15.98	16.70	17.17	18.85
	12H	8.91	9.38	10.12	10.56	12.25	16.21	16.68	17.42	17.86	19.56
4H	2H	7.69	8.25	8.89	9.42	11.09	10.04	10.60	11.24	11.77	13.44
	3H	9.38	9.85	10.58	11.05	12.73	12.82	13.29	14.02	14.48	16.17
	4H	9.99	10.43	11.20	11.61	13.31	14.23	14.66	15.43	15.85	17.55
	6H	10.40	10.77	11.61	11.98	13.67	15.68	16.06	16.89	17.26	18.95
	8H	10.50	10.85	11.71	12.05	13.75	16.43	16.78	17.64	17.98	19.69
	12H	10.53	10.85	11.76	12.06	13.77	17.25	17.57	18.48	18.78	20.49
8H	4H	10.77	11.12	11.97	12.31	14.02	14.35	14.70	15.56	15.90	17.61
	6H	11.39	11.68	12.62	12.92	14.62	15.97	16.26	17.20	17.51	19.21
	8H	11.61	11.86	12.84	13.08	14.80	16.86	17.11	18.09	18.33	20.05
	12H	11.73	11.96	12.97	13.17	14.92	17.84	18.07	19.08	19.28	21.03
12H	4H	10.95	11.27	12.18	12.48	14.19	14.32	14.64	15.54	15.84	17.55
	6H	11.72	11.98	12.95	13.19	14.91	16.00	16.25	17.23	17.47	19.19
	8H	12.02	12.24	13.25	13.45	15.20	16.91	17.14	18.15	18.35	20.10