

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: P998087

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

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998087
REPORT IS A COMBINATION OF REPORTS P983824 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-F
Description: Define 2 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

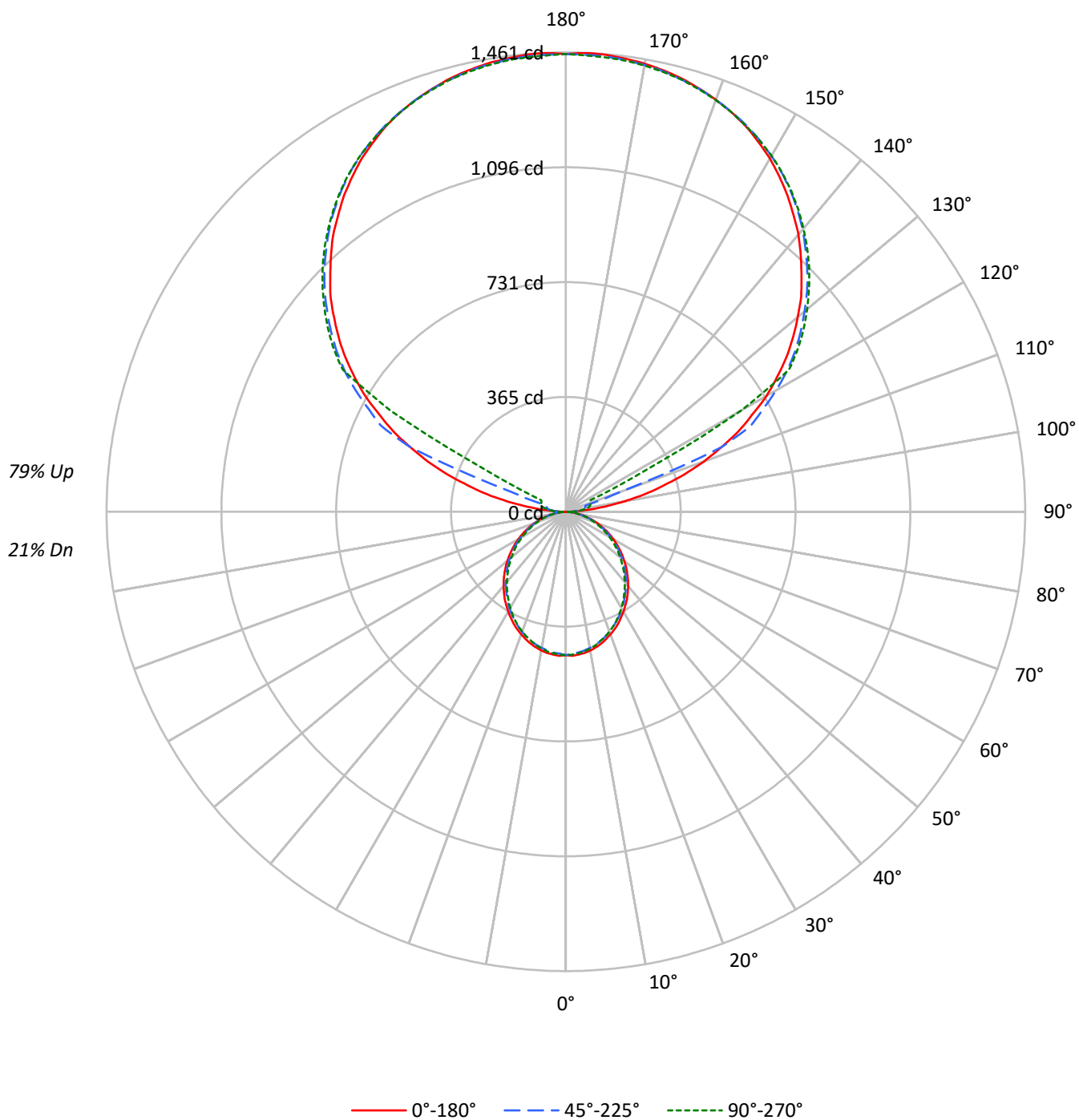
Lumens per Lamp: N/A
Luminaire Lumens: 5430.0 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

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	67	67	67	48	48	48	30	30	30
1	91	87	84	80	81	77	74	72	59	57	55	42	41	40	26	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	45	41	38	32	30	28	20	19	18
4	69	59	51	46	61	52	46	41	40	36	32	29	26	24	18	17	15
5	63	52	45	39	56	47	40	35	36	31	28	26	23	21	16	15	13
6	58	47	39	34	51	42	35	30	32	28	24	23	20	18	15	13	12
7	54	42	34	29	47	38	31	26	29	24	21	21	18	16	14	12	10
8	50	38	31	26	44	34	28	23	26	22	18	19	16	14	12	11	9
9	46	34	27	23	41	31	25	20	24	20	16	18	15	12	11	10	8
10	43	31	25	20	38	28	22	18	22	18	15	16	13	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

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	0.8
10°-20°	120.7	2.2
20°-30°	177.4	3.3
30°-40°	206.1	3.8
40°-50°	205.8	3.8
50°-60°	179.5	3.3
60°-70°	132.7	2.4
70°-80°	75.1	1.4
80°-90°	22.4	0.4
90°-100°	48.0	0.9
100°-110°	178.9	3.3
110°-120°	474.6	8.7
120°-130°	787.1	14.5
130°-140°	836.1	15.4
140°-150°	777.0	14.3
150°-160°	624.7	11.5
160°-170°	402.5	7.4
170°-180°	138.5	2.6
0°-30°	341.1	6.3
0°-40°	547.2	10.1
0°-60°	932.5	17.2
0°-90°	1162.6	21.4
90°-120°	701.5	12.9
90°-150°	3101.6	57.1
90°-180°	4267.0	78.6
0°-180°	5430.0	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	13	21	26	28	5
95°	68	34	41	46	45	81
105°	320	352	64	76	80	342
115°	606	624	650	162	86	596
125°	856	870	890	897	901	764
135°	1060	1076	1086	1096	1094	819
145°	1229	1228	1246	1253	1248	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°	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°	1.1	12.6	21.1	26.3	28.4
92.5°	26.3	22.1	25.3	27.4	28.4
95°	68.5	33.7	41.1	46.3	45.3
97.5°	123.2	36.9	53.7	56.9	57.9
100°	186.4	42.1	60.0	68.5	70.6
102.5°	255.9	253.8	62.1	73.7	76.9
105°	320.2	351.8	64.3	75.8	80.0
107.5°	395.0	421.3	66.4	77.9	82.2
110°	466.6	488.7	184.3	79.0	83.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	534.0	553.0	535.1	81.1	84.3
115°	605.6	623.5	649.9	162.2	86.4
117.5°	667.8	688.9	706.8	556.1	280.2
120°	737.3	753.1	772.1	784.7	642.5
122.5°	796.3	813.1	834.2	840.5	841.6
125°	856.3	870.0	890.0	897.4	900.6
127.5°	911.1	925.8	941.6	952.2	953.2
130°	962.7	979.6	991.1	1002.7	1001.7
132.5°	1015.4	1029.1	1040.6	1050.1	1049.1
135°	1059.6	1076.5	1085.9	1096.5	1094.4
137.5°	1106.0	1118.6	1129.1	1139.7	1136.5
140°	1151.2	1159.7	1171.3	1180.7	1175.5
142.5°	1189.2	1196.5	1210.2	1218.7	1213.4
145°	1229.2	1228.1	1246.0	1253.4	1248.1
147.5°	1263.9	1260.8	1278.7	1284.0	1279.7
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	8.54	9.20	9.71	10.35	11.98	9.32	9.98	10.49	11.13	12.76
	3H	9.86	10.45	11.04	11.61	13.25	10.93	11.52	12.11	12.68	14.32
	4H	10.26	10.82	11.44	11.98	13.62	11.52	12.07	12.70	13.23	14.88
	6H	10.47	10.98	11.66	12.14	13.80	11.91	12.42	13.10	13.58	15.24
	8H	10.49	10.98	11.69	12.16	13.80	12.01	12.50	13.20	13.67	15.32
	12H	10.48	10.94	11.67	12.11	13.78	12.05	12.51	13.25	13.68	15.35
4H	2H	8.99	9.54	10.18	10.70	12.35	9.63	10.18	10.82	11.35	12.99
	3H	10.48	10.95	11.68	12.13	13.79	11.39	11.85	12.59	13.04	14.70
	4H	10.98	11.41	12.18	12.58	14.26	12.06	12.49	13.26	13.66	15.34
	6H	11.27	11.64	12.47	12.83	14.50	12.55	12.91	13.75	14.11	15.77
	8H	11.32	11.66	12.52	12.85	14.54	12.68	13.02	13.88	14.21	15.90
	12H	11.31	11.62	12.53	12.82	14.51	12.74	13.05	13.95	14.24	15.93
8H	4H	11.14	11.48	12.34	12.67	14.35	12.13	12.47	13.33	13.66	15.34
	6H	11.51	11.80	12.73	13.03	14.71	12.69	12.97	13.91	14.20	15.88
	8H	11.61	11.86	12.84	13.07	14.77	12.88	13.12	14.10	14.33	16.03
	12H	11.64	11.85	12.86	13.06	14.79	12.97	13.18	14.19	14.39	16.12
12H	4H	11.11	11.42	12.33	12.62	14.31	12.09	12.39	13.30	13.59	15.28
	6H	11.53	11.77	12.75	12.98	14.68	12.68	12.93	13.90	14.13	15.83
	8H	11.63	11.85	12.86	13.05	14.78	12.87	13.08	14.09	14.29	16.02