

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: P998989

Luminaire Tested: SA2XXDIP-B865D1080UB2750-4F0-XX-W2A-D_4000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P998989
REPORT IS A COMBINATION OF REPORTS P984735 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B865D1080UB2750-4F0-XX-W2A-D_4000K
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

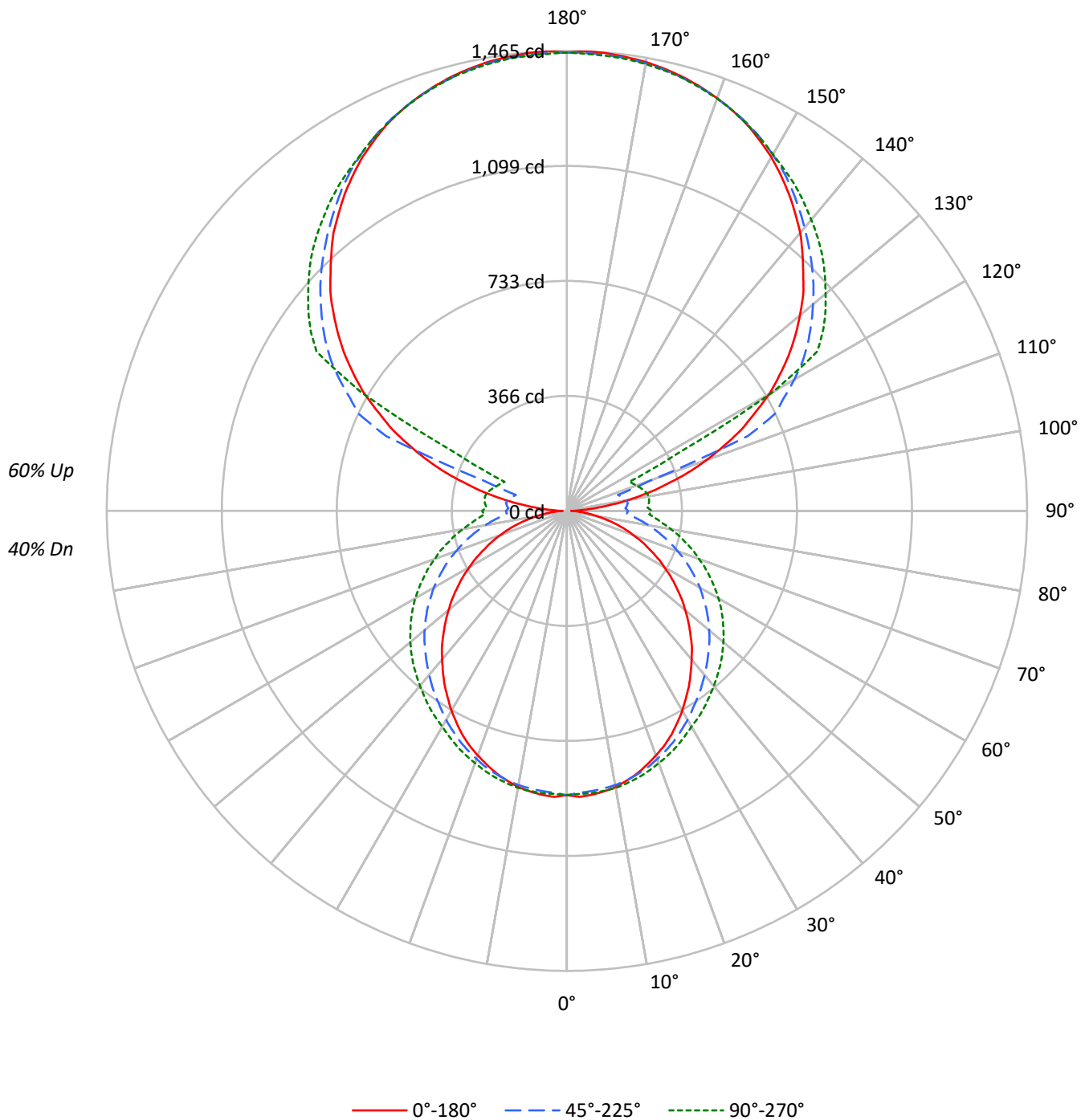
Lumens per Lamp: N/A
Luminaire Lumens: 7735.0 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 81.8
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	50	30	10
RCR																				
0	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47			40
1	94	90	85	81	85	81	78	74	66	64	61	52	50	49	39	38	37			31
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30			25
3	78	68	60	54	70	62	55	50	50	45	41	39	36	33	30	27	25			21
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	24	21			17
5	65	53	45	38	58	48	41	35	39	34	30	31	27	24	24	21	18			15
6	59	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16			13
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14			11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13			10
9	47	35	27	22	43	32	25	21	26	21	18	21	17	14	16	13	11			9
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10			8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14326	14326	14326
5°	14390	13714	13636
10°	14294	13239	13046
15°	14091	12747	12439
20°	13837	12231	11864
25°	13585	11737	11343
30°	13234	11236	10827
35°	12878	10751	10447
40°	12502	10333	10070
45°	12145	9953	9742
50°	11761	9603	9417
55°	11357	9232	9087
60°	10863	8845	8741
65°	10352	8400	8341
70°	9770	7922	7911
75°	9023	7444	7505
80°	7856	6946	7087
85°	6667	6480	6723

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12145 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.8	1.1
10°-20°	246.0	3.2
20°-30°	372.8	4.8
30°-40°	454.0	5.9
40°-50°	488.4	6.3
50°-60°	474.4	6.1
60°-70°	414.3	5.4
70°-80°	318.8	4.1
80°-90°	216.1	2.8
90°-100°	195.5	2.5
100°-110°	287.0	3.7
110°-120°	546.9	7.1
120°-130°	828.8	10.7
130°-140°	855.0	11.1
140°-150°	782.0	10.1
150°-160°	626.5	8.1
160°-170°	403.7	5.2
170°-180°	138.9	1.8
0°-30°	704.6	9.1
0°-40°	1158.6	15.0
0°-60°	2121.4	27.4
0°-90°	3070.6	39.7
90°-120°	1029.4	13.3
90°-150°	3495.3	45.2
90°-180°	4664.0	60.3
0°-180°	7735.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	908	904	896	904	902	86
15°	866	868	868	880	879	244
25°	787	796	808	824	828	362
35°	678	700	725	754	763	424
45°	556	592	637	678	691	429
55°	426	474	542	589	606	381
65°	291	355	433	487	504	289
75°	161	235	319	375	392	171
85°	47	128	212	268	286	50
90°	14	102	194	252	270	13
95°	79	106	192	247	262	90
105°	328	397	177	235	253	351
115°	612	645	730	281	219	603
125°	861	875	937	980	995	769
135°	1064	1081	1103	1142	1150	822
145°	1233	1232	1250	1265	1266	771
155°	1357	1348	1360	1367	1358	625
165°	1430	1424	1427	1434	1427	404
175°	1463	1456	1458	1465	1454	139
180°	1460	1460	1460	1460	1460	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	905.0	905.0	905.0	905.0	905.0
2.5°	911.5	907.6	898.4	905.0	902.3
5°	907.6	903.6	895.8	903.6	902.3
7.5°	901.0	898.4	891.8	901.0	899.7
10°	893.2	890.5	886.6	897.1	895.8
12.5°	880.0	881.3	878.7	889.2	887.9
15°	865.6	868.2	868.2	880.0	878.7
17.5°	847.2	852.5	856.4	868.2	868.2
20°	828.9	835.4	840.7	855.1	855.1
22.5°	809.2	817.1	825.0	839.4	842.0
25°	786.9	796.1	807.9	823.6	827.6
27.5°	760.7	775.1	788.2	807.9	810.5
30°	734.5	751.5	768.6	789.5	793.5
32.5°	705.6	725.3	746.3	771.2	779.1
35°	678.1	700.4	725.3	754.1	763.3
37.5°	647.9	672.8	704.3	735.8	745.0
40°	617.7	646.6	682.0	716.1	727.9
42.5°	588.9	617.7	659.7	697.7	709.5
45°	556.1	591.5	637.4	678.1	691.2
47.5°	524.6	562.6	615.1	657.1	671.5
50°	491.8	532.5	591.5	636.1	650.5
52.5°	460.3	503.6	566.6	612.5	628.2
55°	426.2	473.5	541.7	588.9	605.9
57.5°	393.5	445.9	514.1	565.3	582.3
60°	358.0	414.4	489.2	539.0	557.4
62.5°	326.6	385.6	460.3	514.1	531.2
65°	291.2	355.4	432.8	486.6	503.6
67.5°	259.7	326.6	405.3	459.0	477.4
70°	225.6	293.8	375.1	431.5	447.2
72.5°	194.1	264.9	347.6	402.6	422.3
75°	161.3	234.8	318.7	375.1	392.1
77.5°	129.8	205.9	291.2	347.6	365.9
80°	98.4	178.4	263.6	318.7	337.1
82.5°	72.1	150.8	237.4	292.5	309.5
85°	47.2	128.5	212.5	267.6	285.9
87.5°	28.9	107.5	191.5	245.3	262.3
90°	14.2	101.9	194.2	252.0	269.8
92.5°	38.2	103.5	186.6	240.0	256.7
95°	79.2	105.9	192.0	247.2	261.8
97.5°	132.8	102.6	195.5	247.2	264.0
100°	196.2	99.9	191.4	248.4	264.9
102.5°	264.6	305.7	184.3	243.1	260.7
105°	327.7	397.4	177.2	234.7	253.4
107.5°	402.7	460.5	170.1	226.4	245.0
110°	473.1	521.6	280.5	216.9	235.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	540.7	580.7	623.2	209.8	227.5
115°	612.5	645.0	730.4	280.7	219.1
117.5°	673.6	705.2	778.2	666.6	403.0
120°	743.3	764.4	835.8	885.3	757.1
122.5°	802.4	820.6	890.3	932.1	944.9
125°	861.3	875.1	937.1	979.9	994.9
127.5°	916.3	929.7	981.0	1024.3	1037.2
130°	968.0	983.6	1022.8	1065.8	1075.3
132.5°	1020.8	1033.3	1064.6	1104.2	1113.6
135°	1063.9	1080.8	1103.4	1141.6	1149.9
137.5°	1110.4	1123.0	1140.2	1175.7	1181.7
140°	1155.8	1162.9	1177.1	1207.7	1210.3
142.5°	1193.8	1199.9	1213.6	1237.8	1239.1
145°	1232.6	1231.6	1249.5	1264.8	1266.1
147.5°	1267.5	1264.3	1282.3	1288.9	1288.5
150°	1301.3	1293.9	1310.8	1317.1	1311.9
152.5°	1329.8	1321.4	1337.2	1343.5	1336.2
155°	1357.3	1347.8	1360.4	1366.8	1358.3
157.5°	1379.5	1371.0	1380.5	1387.9	1379.5
160°	1398.5	1392.1	1398.5	1404.8	1397.4
162.5°	1415.4	1409.0	1414.3	1421.7	1412.2
165°	1430.2	1423.8	1427.0	1434.4	1427.0
167.5°	1441.8	1435.4	1438.6	1446.0	1436.5
170°	1451.3	1444.9	1447.1	1454.5	1444.9
172.5°	1457.6	1451.3	1453.4	1460.8	1451.3
175°	1462.9	1455.5	1457.6	1465.0	1454.5
177.5°	1465.0	1457.6	1458.7	1466.1	1456.6
180°	1459.7	1459.7	1459.7	1459.7	1459.7

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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	13.44	14.25	14.47	15.30	16.70	16.51	17.33	17.55	18.37	19.78
	3H	14.90	15.63	15.94	16.68	18.11	19.10	19.83	20.14	20.89	22.31
	4H	15.37	16.07	16.42	17.12	18.56	20.35	21.05	21.40	22.11	23.54
	6H	15.65	16.30	16.71	17.36	18.80	21.65	22.29	22.71	23.35	24.80
	8H	15.71	16.33	16.78	17.40	18.84	22.30	22.92	23.37	24.00	25.44
	12H	15.72	16.31	16.80	17.38	18.85	23.03	23.61	24.10	24.68	26.15
4H	2H	14.48	15.18	15.54	16.24	17.67	16.84	17.54	17.90	18.59	20.03
	3H	16.19	16.78	17.25	17.86	19.31	19.63	20.22	20.69	21.30	22.75
	4H	16.81	17.35	17.88	18.43	19.89	21.04	21.59	22.11	22.66	24.13
	6H	17.22	17.69	18.30	18.79	20.25	22.51	22.98	23.59	24.08	25.54
	8H	17.33	17.77	18.41	18.86	20.34	23.26	23.71	24.34	24.79	26.27
	12H	17.37	17.77	18.47	18.88	20.36	24.09	24.49	25.19	25.59	27.08
8H	4H	17.60	18.04	18.68	19.13	20.60	21.18	21.63	22.26	22.71	24.19
	6H	18.23	18.60	19.33	19.73	21.20	22.81	23.18	23.91	24.31	25.78
	8H	18.45	18.78	19.56	19.89	21.38	23.70	24.03	24.81	25.14	26.63
	12H	18.58	18.87	19.69	19.98	21.51	24.69	24.98	25.80	26.09	27.62
12H	4H	17.79	18.19	18.89	19.30	20.78	21.15	21.56	22.25	22.66	24.14
	6H	18.56	18.89	19.67	20.00	21.49	22.83	23.16	23.94	24.27	25.77
	8H	18.86	19.15	19.98	20.26	21.79	23.76	24.05	24.87	25.16	26.69