

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: P999078

Luminaire Tested: SA2XXDIP-B865D330UB40-4F0-XX-W2A-F1

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P999078
REPORT IS A COMBINATION OF REPORTS P984827 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B865D330UB40-4F0-XX-W2A-F1
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

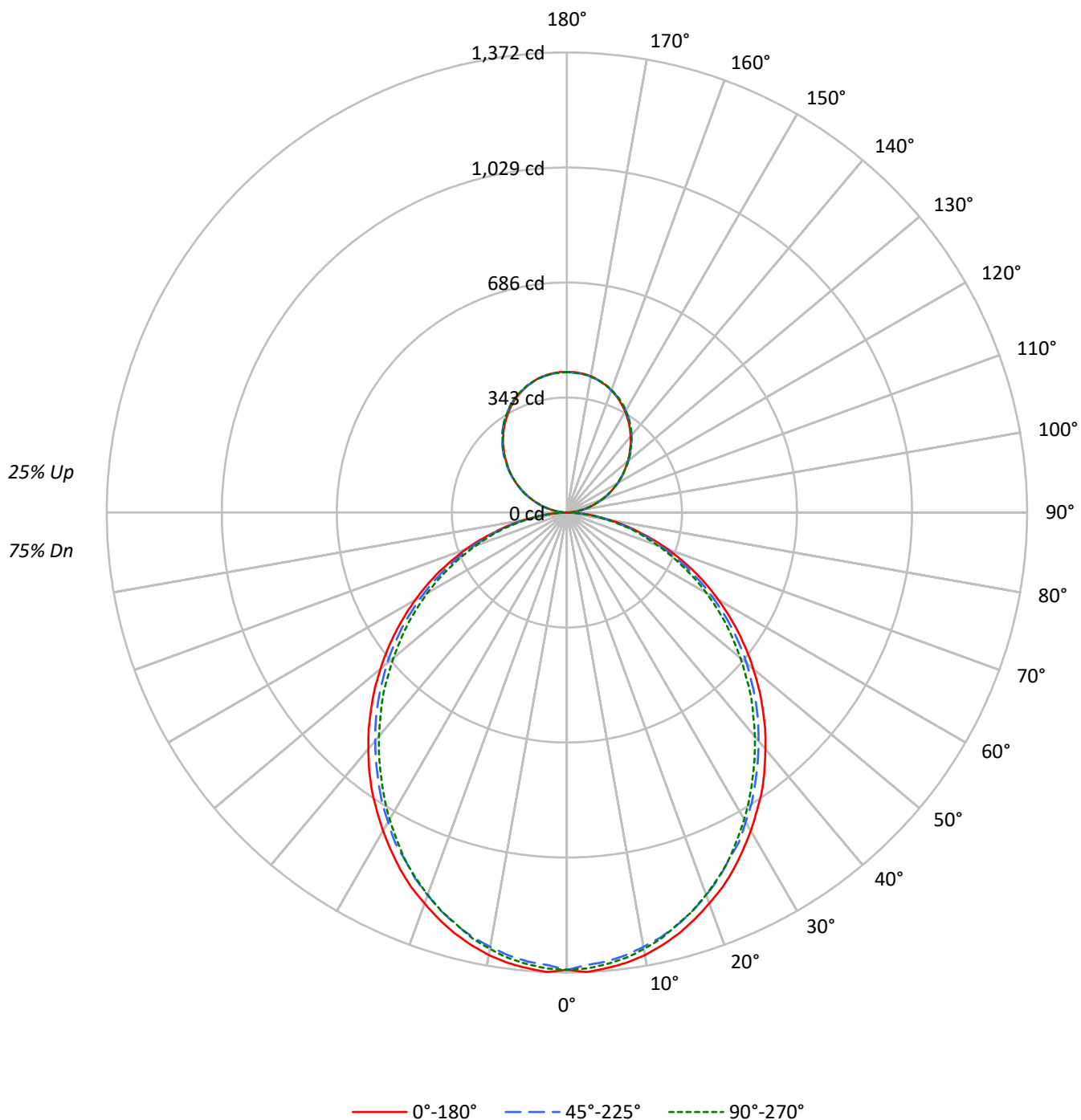
Lumens per Lamp: N/A
Luminaire Lumens: 4642.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 56.1
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	113	113	113	113	107	107	107	107	97	97	97	88	88	88	79	79	79	79	79	79
1	103	99	95	91	98	94	91	87	85	83	80	77	75	73	70	68	67	67	67	63
2	94	86	80	75	89	82	77	72	75	70	66	68	64	61	61	59	56	56	56	53
3	86	76	68	62	81	73	66	60	66	60	56	60	56	52	54	51	48	48	48	45
4	79	67	59	53	75	64	57	51	59	53	48	54	49	44	49	45	41	41	41	38
5	72	60	52	45	69	58	50	44	53	46	41	48	43	39	44	40	36	36	36	33
6	67	54	46	40	63	52	44	39	48	41	36	44	38	34	40	35	32	32	32	29
7	62	49	41	35	59	47	39	34	43	37	32	40	34	30	36	32	28	28	28	26
8	58	45	37	31	55	43	35	30	40	33	29	36	31	27	34	29	25	25	25	23
9	54	41	33	28	51	39	32	27	36	30	26	34	28	24	31	26	23	23	23	21
10	50	38	30	25	48	36	29	25	34	28	23	31	26	22	29	24	21	21	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21590	21590	21590
5°	21625	20578	20433
10°	21449	19641	19251
15°	21135	18696	18008
20°	20710	17668	16831
25°	20287	16595	15656
30°	19755	15586	14422
35°	19254	14522	13210
40°	18632	13472	12065
45°	18016	12431	10943
50°	17342	11370	9778
55°	16635	10236	8673
60°	15840	9011	7527
65°	14966	7763	6320
70°	13858	6397	5104
75°	12324	4931	3941
80°	10467	3352	2537
85°	7600	1558	1079

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 18016 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	2.8
10°-20°	361.2	7.8
20°-30°	530.8	11.4
30°-40°	616.5	13.3
40°-50°	615.7	13.3
50°-60°	536.9	11.6
60°-70°	396.9	8.5
70°-80°	224.5	4.8
80°-90°	60.5	1.3
90°-100°	25.9	0.6
100°-110°	82.3	1.8
110°-120°	140.9	3.0
120°-130°	185.3	4.0
130°-140°	208.0	4.5
140°-150°	204.0	4.4
150°-160°	171.1	3.7
160°-170°	113.5	2.4
170°-180°	39.7	0.9
0°-30°	1020.3	22.0
0°-40°	1636.8	35.3
0°-60°	2789.4	60.1
0°-90°	3471.2	74.8
90°-120°	249.2	5.4
90°-150°	846.5	18.2
90°-180°	1171.0	25.2
0°-180°	4642.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1364	1364	1364	1364	1364	
5°	1364	1359	1344	1355	1352	129
15°	1298	1290	1273	1279	1272	366
25°	1175	1165	1142	1145	1142	541
35°	1014	1001	980	972	965	633
45°	825	816	796	782	776	637
55°	624	616	601	585	578	558
65°	421	413	400	388	382	416
75°	220	218	211	203	206	235
85°	54	52	51	47	46	60
90°	0	5	12	12	12	4
95°	18	22	23	23	22	21
105°	76	77	78	78	78	80
115°	141	144	143	142	141	140
125°	206	209	208	207	206	184
135°	266	270	271	270	269	206
145°	323	326	328	328	326	202
155°	369	370	371	373	372	170
165°	402	402	402	404	402	113
175°	418	417	416	419	417	40
180°	419	419	419	419	419	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1363.9	1363.9	1363.9	1363.9	1363.9
2.5°	1371.8	1365.2	1350.8	1363.9	1361.3
5°	1363.9	1358.7	1344.2	1354.7	1352.1
7.5°	1354.7	1346.9	1332.4	1342.9	1340.3
10°	1340.3	1331.1	1315.4	1325.9	1321.9
12.5°	1320.6	1312.8	1297.0	1303.6	1301.0
15°	1298.3	1290.5	1273.4	1278.7	1272.1
17.5°	1270.8	1262.9	1245.9	1252.4	1245.9
20°	1240.6	1232.8	1214.4	1218.3	1213.1
22.5°	1210.5	1198.7	1181.6	1181.6	1179.0
25°	1175.1	1164.6	1142.3	1144.9	1142.3
27.5°	1135.7	1126.5	1109.5	1105.6	1099.0
30°	1096.4	1085.9	1066.2	1062.3	1057.0
32.5°	1054.4	1046.5	1025.6	1017.7	1012.4
35°	1013.8	1000.6	979.7	971.8	965.2
37.5°	967.9	956.0	935.1	925.9	919.3
40°	920.6	910.1	889.2	877.4	872.1
42.5°	874.7	864.2	843.3	830.1	822.3
45°	824.9	815.7	796.1	781.6	776.4
47.5°	776.4	767.2	746.2	731.8	723.9
50°	725.2	718.7	700.3	682.0	675.4
52.5°	675.4	666.2	649.2	634.7	625.6
55°	624.3	616.4	600.6	584.9	578.3
57.5°	573.1	566.5	549.5	533.8	528.5
60°	522.0	516.7	498.4	483.9	480.0
62.5°	472.1	462.9	449.8	436.7	431.5
65°	421.0	413.1	400.0	388.2	381.6
67.5°	368.5	362.0	350.2	341.0	335.7
70°	320.0	314.7	302.9	293.8	288.5
72.5°	270.2	264.9	258.4	249.2	245.2
75°	220.3	217.7	211.1	203.3	205.9
77.5°	175.7	170.5	167.9	163.9	160.0
80°	131.1	129.8	127.2	123.3	120.7
82.5°	89.2	89.2	87.9	82.6	82.6
85°	53.8	52.5	51.1	47.2	45.9
87.5°	23.6	21.0	18.4	14.4	13.1
90°	0.4	4.6	12.4	11.7	12.0
92.5°	7.8	10.6	11.0	11.3	11.3
95°	18.4	21.9	22.6	22.6	21.9
97.5°	30.7	33.9	35.3	35.3	35.3
100°	44.9	47.7	48.8	48.8	48.4
102.5°	59.7	61.8	63.3	63.6	63.3
105°	76.0	77.0	77.7	78.5	78.5
107.5°	92.2	93.6	93.6	94.0	92.2
110°	107.8	109.9	109.9	109.9	108.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	124.7	126.9	126.5	125.5	124.7
115°	141.4	143.5	142.8	142.4	141.4
117.5°	158.0	160.8	159.0	158.0	156.9
120°	174.6	177.4	174.6	174.6	173.5
122.5°	189.8	193.3	191.5	190.5	189.8
125°	205.7	208.9	207.8	206.7	206.4
127.5°	221.2	225.1	223.7	222.3	221.2
130°	235.7	240.3	239.6	238.9	237.5
132.5°	252.0	255.5	255.9	254.1	253.0
135°	266.1	270.0	270.7	270.3	269.3
137.5°	281.7	284.8	285.5	285.2	283.8
140°	295.4	298.6	300.4	300.4	299.0
142.5°	309.6	312.8	313.8	314.2	312.8
145°	323.0	325.5	327.6	328.0	326.5
147.5°	335.0	338.2	339.6	340.3	338.9
150°	347.4	349.5	350.9	352.0	350.9
152.5°	358.3	360.5	362.2	363.6	362.2
155°	369.3	370.4	371.4	373.2	372.1
157.5°	378.8	379.5	380.3	382.7	381.0
160°	387.3	388.0	388.4	390.5	389.1
162.5°	395.1	395.1	395.4	397.9	396.2
165°	401.8	401.5	401.5	403.9	402.2
167.5°	407.8	406.8	406.8	409.2	407.5
170°	412.4	411.4	411.0	413.5	411.4
172.5°	415.6	414.5	414.2	416.7	414.5
175°	418.1	417.0	416.3	418.8	416.7
177.5°	419.5	418.4	417.7	419.8	417.7
180°	418.8	418.8	418.8	418.8	418.8

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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	17.94	19.08	18.65	19.81	20.68	18.72	19.86	19.43	20.59	21.46
	3H	19.30	20.32	20.02	21.06	21.96	20.37	21.39	21.09	22.13	23.03
	4H	19.71	20.68	20.46	21.43	22.34	20.97	21.94	21.71	22.69	23.60
	6H	19.95	20.84	20.70	21.60	22.52	21.39	22.28	22.15	23.04	23.97
	8H	19.98	20.84	20.75	21.61	22.54	21.51	22.36	22.27	23.14	24.06
	12H	19.99	20.80	20.76	21.57	22.53	21.56	22.37	22.33	23.14	24.10
4H	2H	18.44	19.41	19.19	20.16	21.07	19.08	20.05	19.83	20.80	21.71
	3H	19.98	20.79	20.74	21.58	22.50	20.89	21.70	21.65	22.48	23.41
	4H	20.50	21.23	21.27	22.02	22.98	21.58	22.32	22.36	23.10	24.06
	6H	20.82	21.45	21.61	22.27	23.23	22.09	22.73	22.89	23.54	24.51
	8H	20.88	21.48	21.68	22.28	23.26	22.24	22.84	23.04	23.64	24.62
	12H	20.89	21.43	21.71	22.26	23.24	22.32	22.85	23.13	23.68	24.66
8H	4H	20.70	21.29	21.49	22.10	23.08	21.69	22.28	22.49	23.09	24.07
	6H	21.09	21.58	21.92	22.43	23.41	22.27	22.76	23.09	23.61	24.59
	8H	21.20	21.64	22.03	22.48	23.48	22.46	22.90	23.30	23.75	24.74
	12H	21.24	21.63	22.08	22.47	23.52	22.57	22.96	23.41	23.80	24.85
12H	4H	20.69	21.23	21.51	22.06	23.04	21.67	22.20	22.48	23.03	24.01
	6H	21.11	21.55	21.95	22.40	23.39	22.26	22.70	23.10	23.55	24.54
	8H	21.24	21.62	22.08	22.46	23.51	22.47	22.86	23.31	23.70	24.75