

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: P997665

Luminaire Tested: SA2XXDP-B865DB2750-4F0-XX-W2A-D_4000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997665
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDP-B865DB2750-4F0-XX-W2A-D_4000K
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

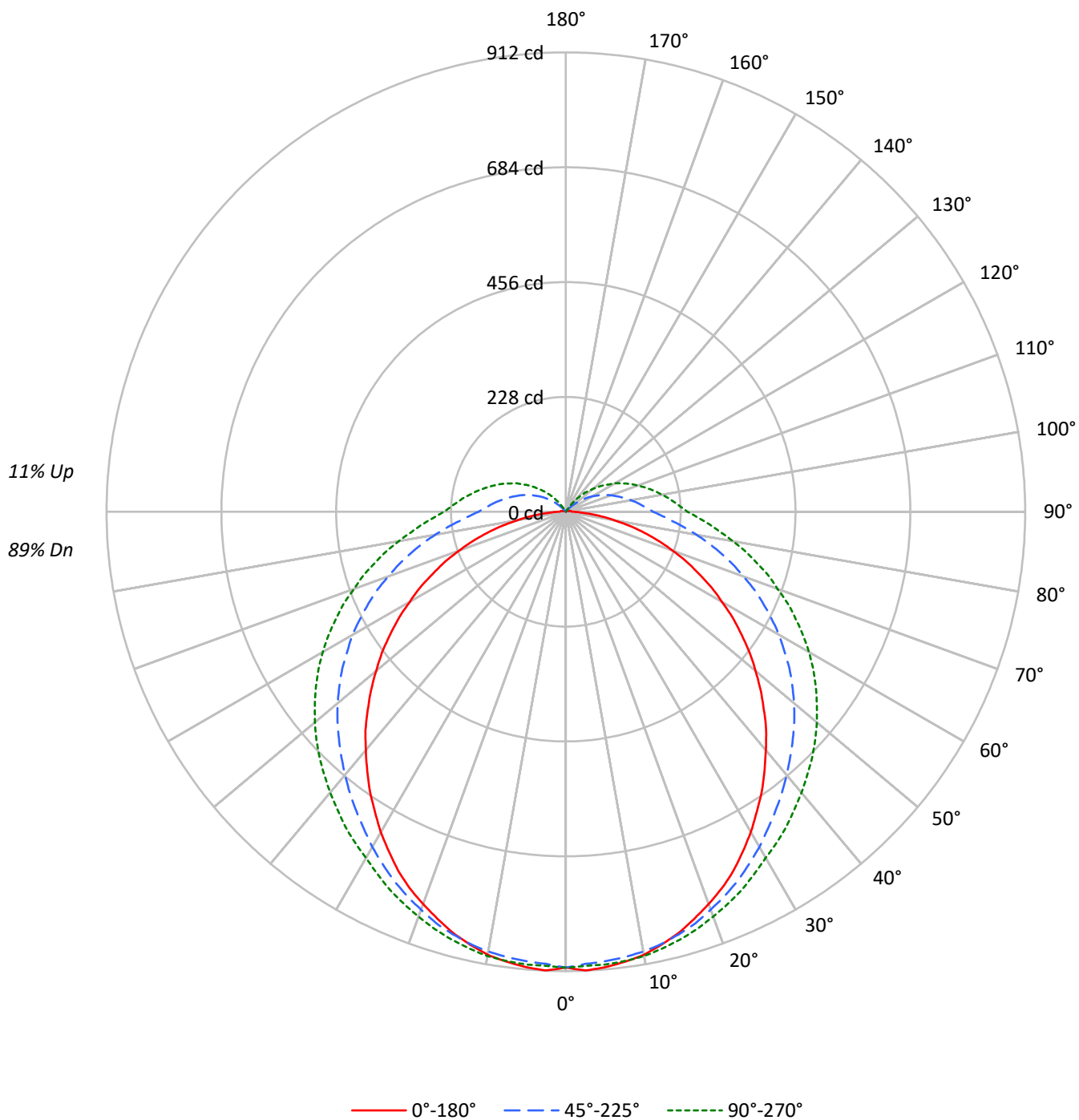
Lumens per Lamp: N/A
Luminaire Lumens: 3453.0 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 46.8
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
RCR																	
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14326	14326	14326
5°	14422	14234	14337
10°	14357	14251	14399
15°	14185	14228	14400
20°	13963	14162	14404
25°	13744	14111	14455
30°	13425	14049	14504
35°	13104	14016	14750
40°	12764	14093	15041
45°	12449	14269	15473
50°	12111	14566	16019
55°	11762	14950	16721
60°	11334	15487	17646
65°	10907	16211	18862
70°	10441	17360	20697
75°	9865	19492	23981
80°	8970	24029	30729
85°	8572	38594	51925

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 95188 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.8	2.5
10°-20°	246.0	7.1
20°-30°	372.8	10.8
30°-40°	454.0	13.1
40°-50°	488.4	14.1
50°-60°	474.4	13.7
60°-70°	414.3	12.0
70°-80°	318.8	9.2
80°-90°	213.5	6.2
90°-100°	147.3	4.3
100°-110°	107.6	3.1
110°-120°	71.0	2.1
120°-130°	39.6	1.1
130°-140°	16.6	0.5
140°-150°	2.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	704.6	20.4
0°-40°	1158.6	33.6
0°-60°	2121.4	61.4
0°-90°	3068.1	88.9
90°-120°	325.9	9.4
90°-150°	384.9	11.1
90°-180°	385.0	11.1
0°-180°	3453.0	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°	13	89	173	226	241	9
95°	10	72	151	201	216	8
105°	7	45	113	159	173	7
115°	5	20	79	118	132	5
125°	3	3	45	80	92	3
135°	1	1	14	42	52	1
145°	0	0	0	8	14	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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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°	13.1	89.2	173.1	225.6	241.3
92.5°	11.8	81.3	161.3	212.5	228.2
95°	10.5	72.1	150.8	200.7	216.4
97.5°	9.2	65.6	141.6	190.2	205.9
100°	9.2	57.7	131.2	179.7	194.1
102.5°	7.9	51.1	122.0	169.2	183.6
105°	6.6	44.6	112.8	158.7	173.1
107.5°	6.6	38.0	103.6	148.2	162.6
110°	5.2	31.5	95.7	137.7	152.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	26.2	86.6	128.5	143.0
115°	5.2	19.7	78.7	118.0	132.5
117.5°	3.9	14.4	69.5	108.9	122.0
120°	3.9	9.2	61.6	98.4	112.8
122.5°	3.9	5.2	53.8	89.2	101.0
125°	2.6	2.6	44.6	80.0	91.8
127.5°	2.6	1.3	36.7	69.5	81.3
130°	2.6	1.3	28.9	60.3	70.8
132.5°	2.6	1.3	21.0	51.1	61.6
135°	1.3	1.3	14.4	42.0	52.5
137.5°	1.3	1.3	7.9	32.8	42.0
140°	1.3	0.0	2.6	23.6	31.5
142.5°	1.3	0.0	0.0	15.7	22.3
145°	0.0	0.0	0.0	7.9	14.4
147.5°	0.0	0.0	0.0	1.3	5.2
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

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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	19.64	21.12	20.17	21.65	22.23	21.49	22.97	22.02	23.50	24.08
	3H	21.52	22.87	22.06	23.41	24.03	24.15	25.50	24.69	26.04	26.66
	4H	22.25	23.54	22.81	24.09	24.72	25.45	26.74	26.01	27.29	27.92
	6H	22.81	24.01	23.38	24.57	25.22	26.83	28.03	27.40	28.59	29.24
	8H	23.00	24.15	23.59	24.74	25.39	27.55	28.70	28.13	29.29	29.94
	12H	23.15	24.25	23.74	24.84	25.52	28.37	29.47	28.96	30.05	30.73
4H	2H	20.76	22.05	21.32	22.60	23.23	22.12	23.40	22.68	23.96	24.58
	3H	22.94	24.04	23.51	24.63	25.29	25.05	26.16	25.63	26.75	27.40
	4H	23.86	24.87	24.45	25.47	26.15	26.57	27.58	27.16	28.18	28.87
	6H	24.61	25.50	25.22	26.13	26.82	28.17	29.07	28.78	29.69	30.38
	8H	24.89	25.73	25.50	26.36	27.06	29.01	29.85	29.62	30.48	31.18
	12H	25.11	25.88	25.75	26.53	27.25	29.97	30.74	30.60	31.39	32.10
8H	4H	24.79	25.63	25.40	26.26	26.96	26.98	27.82	27.60	28.45	29.16
	6H	25.85	26.57	26.49	27.23	27.94	28.84	29.55	29.48	30.22	30.93
	8H	26.31	26.96	26.96	27.63	28.35	29.88	30.52	30.53	31.20	31.92
	12H	26.71	27.29	27.37	27.95	28.74	31.08	31.66	31.74	32.33	33.11
12H	4H	25.05	25.82	25.69	26.47	27.19	27.03	27.80	27.67	28.45	29.17
	6H	26.28	26.93	26.94	27.60	28.33	28.96	29.61	29.62	30.29	31.01
	8H	26.90	27.48	27.56	28.14	28.93	30.12	30.70	30.78	31.36	32.15