

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: P997655

Luminaire Tested: SA2XXDP-B865DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997655
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-B865DB27-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

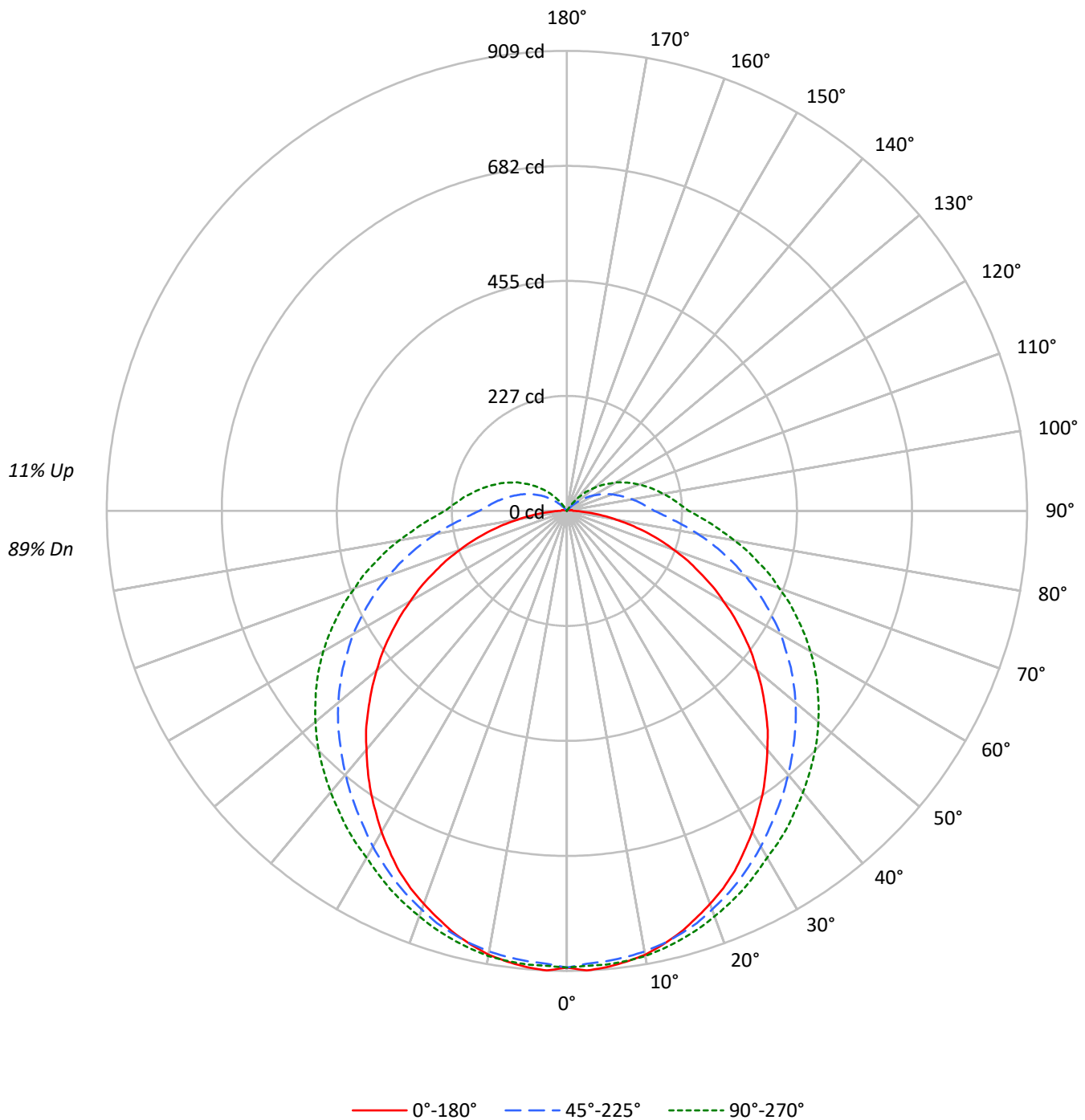
Lumens per Lamp: N/A
Luminaire Lumens: 3443.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	14283	14283	14283
5°	14380	14193	14296
10°	14315	14209	14357
15°	14144	14187	14359
20°	13923	14121	14362
25°	13704	14070	14413
30°	13385	14006	14462
35°	13065	13975	14707
40°	12727	14051	14998
45°	12413	14229	15428
50°	12077	14524	15972
55°	11729	14905	16674
60°	11302	15443	17596
65°	10873	16166	18810
70°	10409	17309	20637
75°	9841	19437	23913
80°	8943	23965	30638
85°	8554	38485	51780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 94897 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	2.5
10°-20°	245.3	7.1
20°-30°	371.7	10.8
30°-40°	452.7	13.1
40°-50°	487.0	14.1
50°-60°	473.0	13.7
60°-70°	413.1	12.0
70°-80°	317.9	9.2
80°-90°	212.9	6.2
90°-100°	146.9	4.3
100°-110°	107.3	3.1
110°-120°	70.8	2.1
120°-130°	39.5	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°	702.6	20.4
0°-40°	1155.3	33.6
0°-60°	2115.3	61.4
0°-90°	3059.2	88.9
90°-120°	325.0	9.4
90°-150°	383.8	11.1
90°-180°	384.0	11.2
0°-180°	3443.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	905	901	893	901	900	86
15°	863	866	866	878	876	243
25°	785	794	806	821	825	361
35°	676	698	723	752	761	423
45°	554	590	636	676	689	428
55°	425	472	540	587	604	380
65°	290	354	432	485	502	288
75°	161	234	318	374	391	170
85°	47	128	212	267	285	50
90°	13	89	173	225	241	9
95°	10	72	150	200	216	8
105°	6	44	112	158	173	7
115°	5	20	78	118	132	5
125°	3	3	44	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°	902.3	902.3	902.3	902.3	902.3
2.5°	908.9	905.0	895.8	902.3	899.7
5°	905.0	901.0	893.2	901.0	899.7
7.5°	898.4	895.8	889.3	898.4	897.1
10°	890.6	888.0	884.0	894.5	893.2
12.5°	877.5	878.8	876.2	886.6	885.3
15°	863.1	865.7	865.7	877.5	876.2
17.5°	844.8	850.0	854.0	865.7	865.7
20°	826.5	833.0	838.3	852.6	852.6
22.5°	806.9	814.7	822.6	836.9	839.6
25°	784.6	793.8	805.6	821.3	825.2
27.5°	758.5	772.9	785.9	805.6	808.2
30°	732.3	749.3	766.3	787.3	791.2
32.5°	703.6	723.2	744.1	768.9	776.8
35°	676.1	698.3	723.2	751.9	761.1
37.5°	646.0	670.9	702.3	733.6	742.8
40°	615.9	644.7	680.0	714.0	725.8
42.5°	587.2	615.9	657.8	695.7	707.5
45°	554.5	589.8	635.6	676.1	689.2
47.5°	523.1	561.0	613.3	655.2	669.6
50°	490.4	530.9	589.8	634.3	648.6
52.5°	459.0	502.2	564.9	610.7	626.4
55°	425.0	472.1	540.1	587.2	604.2
57.5°	392.3	444.6	512.6	563.6	580.6
60°	357.0	413.2	487.8	537.5	555.8
62.5°	325.6	384.5	459.0	512.6	529.6
65°	290.3	354.4	431.6	485.2	502.2
67.5°	258.9	325.6	404.1	457.7	476.0
70°	224.9	292.9	374.0	430.2	445.9
72.5°	193.5	264.2	346.5	401.5	421.1
75°	160.9	234.1	317.8	374.0	391.0
77.5°	129.5	205.3	290.3	346.5	364.9
80°	98.1	177.9	262.9	317.8	336.1
82.5°	71.9	150.4	236.7	291.6	308.6
85°	47.1	128.2	211.9	266.8	285.1
87.5°	28.8	107.2	190.9	244.5	261.5
90°	13.1	88.9	172.6	224.9	240.6
92.5°	11.8	81.1	160.9	211.9	227.5
95°	10.5	71.9	150.4	200.1	215.8
97.5°	9.2	65.4	141.2	189.6	205.3
100°	9.2	57.5	130.8	179.2	193.5
102.5°	7.8	51.0	121.6	168.7	183.1
105°	6.5	44.5	112.5	158.2	172.6
107.5°	6.5	37.9	103.3	147.8	162.2
110°	5.2	31.4	95.5	137.3	151.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	26.2	86.3	128.2	142.5
115°	5.2	19.6	78.5	117.7	132.1
117.5°	3.9	14.4	69.3	108.5	121.6
120°	3.9	9.2	61.5	98.1	112.5
122.5°	3.9	5.2	53.6	88.9	100.7
125°	2.6	2.6	44.5	79.8	91.5
127.5°	2.6	1.3	36.6	69.3	81.1
130°	2.6	1.3	28.8	60.2	70.6
132.5°	2.6	1.3	20.9	51.0	61.5
135°	1.3	1.3	14.4	41.8	52.3
137.5°	1.3	1.3	7.8	32.7	41.8
140°	1.3	0.0	2.6	23.5	31.4
142.5°	1.3	0.0	0.0	15.7	22.2
145°	0.0	0.0	0.0	7.8	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	19.63	21.11	20.16	21.64	22.22	21.48	22.96	22.01	23.49	24.07
	3H	21.51	22.86	22.05	23.40	24.02	24.14	25.49	24.68	26.03	26.65
	4H	22.24	23.53	22.80	24.08	24.71	25.44	26.73	26.00	27.28	27.91
	6H	22.80	24.00	23.37	24.56	25.21	26.82	28.02	27.39	28.58	29.23
	8H	22.99	24.14	23.58	24.73	25.38	27.54	28.69	28.12	29.28	29.93
	12H	23.14	24.24	23.73	24.83	25.51	28.36	29.46	28.95	30.04	30.72
4H	2H	20.75	22.04	21.31	22.59	23.22	22.11	23.39	22.67	23.95	24.57
	3H	22.93	24.03	23.50	24.62	25.28	25.04	26.15	25.62	26.74	27.39
	4H	23.85	24.86	24.44	25.46	26.14	26.56	27.57	27.15	28.17	28.86
	6H	24.60	25.49	25.21	26.12	26.81	28.16	29.06	28.77	29.68	30.37
	8H	24.88	25.72	25.49	26.35	27.05	29.00	29.84	29.61	30.47	31.17
	12H	25.10	25.87	25.74	26.52	27.24	29.96	30.73	30.59	31.38	32.09
8H	4H	24.78	25.62	25.39	26.25	26.95	26.97	27.81	27.58	28.44	29.15
	6H	25.84	26.56	26.48	27.22	27.93	28.83	29.54	29.47	30.21	30.92
	8H	26.30	26.95	26.95	27.62	28.34	29.86	30.51	30.52	31.19	31.91
	12H	26.70	27.28	27.36	27.94	28.73	31.07	31.65	31.73	32.32	33.10
12H	4H	25.04	25.81	25.68	26.46	27.18	27.02	27.79	27.66	28.44	29.15
	6H	26.27	26.92	26.93	27.59	28.32	28.95	29.60	29.61	30.28	31.00
	8H	26.89	27.47	27.55	28.13	28.92	30.11	30.69	30.77	31.35	32.14