

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: P997619

Luminaire Tested: SA2XXDP-B485DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997619
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-B485DB40-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

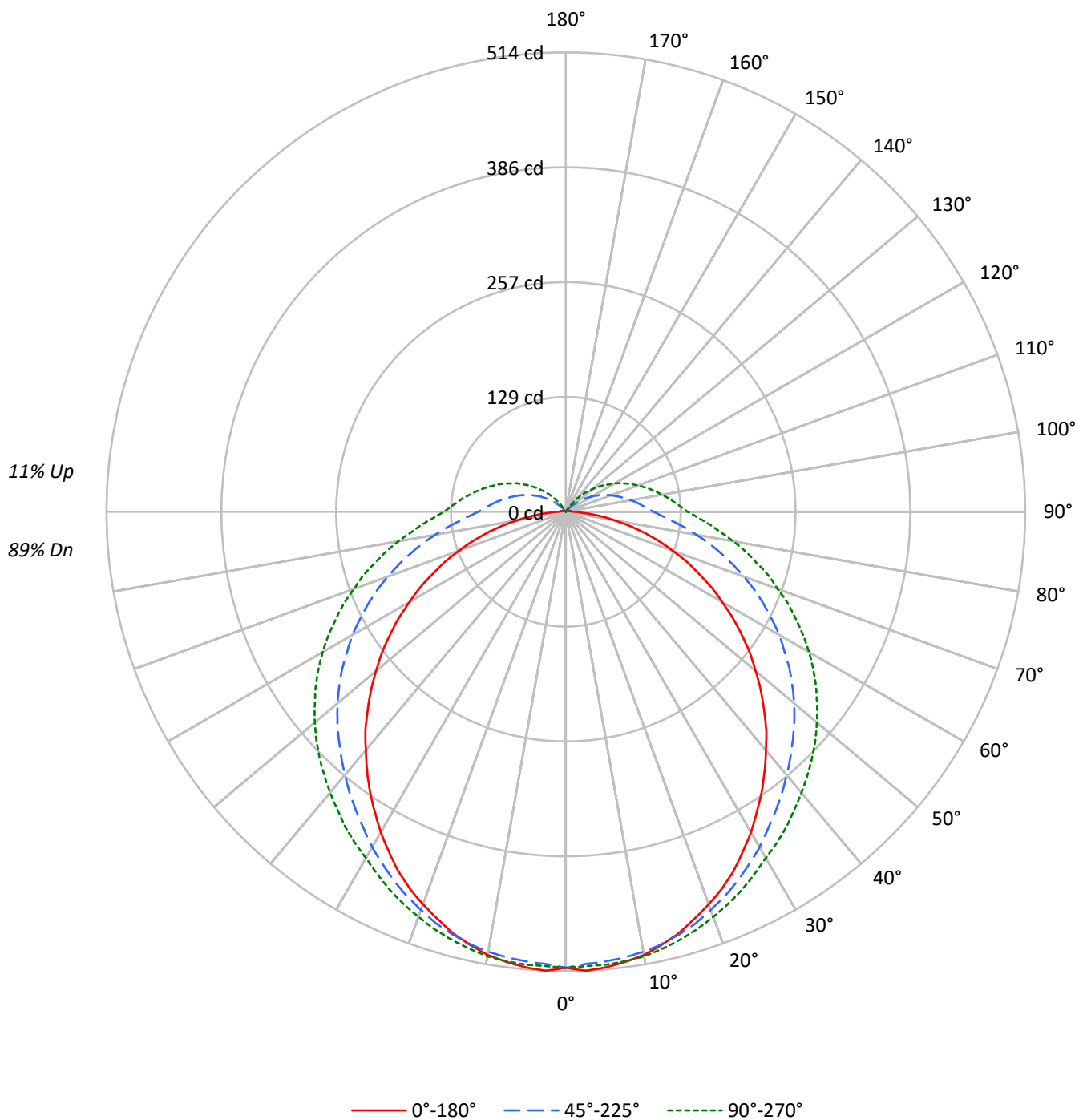
Lumens per Lamp: N/A
Luminaire Lumens: 1947.0 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8078	8078	8078
5°	8131	8026	8085
10°	8095	8035	8119
15°	7999	8023	8120
20°	7873	7985	8123
25°	7750	7956	8149
30°	7569	7922	8178
35°	7388	7904	8317
40°	7197	7945	8480
45°	7020	8046	8724
50°	6829	8213	9033
55°	6632	8428	9430
60°	6392	8731	9950
65°	6150	9139	10637
70°	5887	9789	11672
75°	5566	10990	13522
80°	5059	13546	17329
85°	4831	21758	29277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 53672 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	2.5
10°-20°	138.7	7.1
20°-30°	210.2	10.8
30°-40°	256.0	13.1
40°-50°	275.4	14.1
50°-60°	267.5	13.7
60°-70°	233.6	12.0
70°-80°	179.8	9.2
80°-90°	120.4	6.2
90°-100°	83.1	4.3
100°-110°	60.7	3.1
110°-120°	40.1	2.1
120°-130°	22.3	1.1
130°-140°	9.4	0.5
140°-150°	1.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	397.3	20.4
0°-40°	653.3	33.6
0°-60°	1196.2	61.4
0°-90°	1729.9	88.9
90°-120°	183.8	9.4
90°-150°	217.0	11.1
90°-180°	217.0	11.1
0°-180°	1947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	510	510	510	510	510	
5°	512	510	505	510	509	49
15°	488	490	490	496	496	137
25°	444	449	456	464	467	204
35°	382	395	409	425	430	239
45°	314	334	359	382	390	242
55°	240	267	305	332	342	215
65°	164	200	244	274	284	163
75°	91	132	180	212	221	96
85°	27	72	120	151	161	28
90°	7	50	98	127	136	5
95°	6	41	85	113	122	5
105°	4	25	64	90	98	4
115°	3	11	44	67	75	3
125°	2	2	25	45	52	2
135°	1	1	8	24	30	1
145°	0	0	0	4	8	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°	510.3	510.3	510.3	510.3	510.3
2.5°	514.0	511.7	506.6	510.3	508.8
5°	511.7	509.5	505.1	509.5	508.8
7.5°	508.0	506.6	502.9	508.0	507.3
10°	503.6	502.1	499.9	505.8	505.1
12.5°	496.2	497.0	495.5	501.4	500.7
15°	488.1	489.6	489.6	496.2	495.5
17.5°	477.7	480.7	482.9	489.6	489.6
20°	467.4	471.1	474.0	482.2	482.2
22.5°	456.3	460.7	465.2	473.3	474.8
25°	443.7	448.9	455.5	464.4	466.6
27.5°	428.9	437.1	444.4	455.5	457.0
30°	414.1	423.7	433.4	445.2	447.4
32.5°	397.9	409.0	420.8	434.8	439.3
35°	382.3	394.9	409.0	425.2	430.4
37.5°	365.3	379.4	397.1	414.9	420.0
40°	348.3	364.6	384.5	403.8	410.4
42.5°	332.0	348.3	372.0	393.4	400.1
45°	313.6	333.5	359.4	382.3	389.7
47.5°	295.8	317.3	346.8	370.5	378.6
50°	277.3	300.2	333.5	358.7	366.8
52.5°	259.6	284.0	319.5	345.4	354.2
55°	240.3	267.0	305.4	332.0	341.7
57.5°	221.9	251.4	289.9	318.7	328.3
60°	201.9	233.7	275.8	303.9	314.3
62.5°	184.1	217.4	259.6	289.9	299.5
65°	164.2	200.4	244.0	274.4	284.0
67.5°	146.4	184.1	228.5	258.8	269.2
70°	127.2	165.7	211.5	243.3	252.2
72.5°	109.4	149.4	196.0	227.0	238.1
75°	91.0	132.4	179.7	211.5	221.1
77.5°	73.2	116.1	164.2	196.0	206.3
80°	55.5	100.6	148.6	179.7	190.1
82.5°	40.7	85.0	133.9	164.9	174.5
85°	26.6	72.5	119.8	150.9	161.2
87.5°	16.3	60.6	108.0	138.3	147.9
90°	7.4	50.3	97.6	127.2	136.1
92.5°	6.7	45.9	91.0	119.8	128.7
95°	5.9	40.7	85.0	113.1	122.0
97.5°	5.2	37.0	79.9	107.2	116.1
100°	5.2	32.5	74.0	101.3	109.4
102.5°	4.4	28.8	68.8	95.4	103.5
105°	3.7	25.1	63.6	89.5	97.6
107.5°	3.7	21.4	58.4	83.6	91.7
110°	3.0	17.7	54.0	77.6	85.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	14.8	48.8	72.5	80.6
115°	3.0	11.1	44.4	66.6	74.7
117.5°	2.2	8.1	39.2	61.4	68.8
120°	2.2	5.2	34.8	55.5	63.6
122.5°	2.2	3.0	30.3	50.3	56.9
125°	1.5	1.5	25.1	45.1	51.8
127.5°	1.5	0.7	20.7	39.2	45.9
130°	1.5	0.7	16.3	34.0	39.9
132.5°	1.5	0.7	11.8	28.8	34.8
135°	0.7	0.7	8.1	23.7	29.6
137.5°	0.7	0.7	4.4	18.5	23.7
140°	0.7	0.0	1.5	13.3	17.7
142.5°	0.7	0.0	0.0	8.9	12.6
145°	0.0	0.0	0.0	4.4	8.1
147.5°	0.0	0.0	0.0	0.7	3.0
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	17.65	19.13	18.17	19.66	20.24	19.50	20.98	20.02	21.51	22.09
	3H	19.53	20.88	20.07	21.42	22.04	22.16	23.51	22.70	24.05	24.67
	4H	20.26	21.54	20.82	22.10	22.73	23.46	24.75	24.02	25.30	25.93
	6H	20.82	22.02	21.39	22.58	23.23	24.84	26.04	25.41	26.60	27.25
	8H	21.01	22.16	21.60	22.75	23.40	25.56	26.71	26.14	27.30	27.95
	12H	21.16	22.26	21.75	22.85	23.53	26.38	27.48	26.97	28.06	28.74
4H	2H	18.77	20.06	19.33	20.61	21.24	20.13	21.41	20.69	21.96	22.59
	3H	20.95	22.05	21.52	22.64	23.29	23.06	24.17	23.64	24.76	25.41
	4H	21.87	22.88	22.46	23.48	24.16	24.58	25.59	25.17	26.19	26.87
	6H	22.62	23.51	23.23	24.14	24.83	26.18	27.07	26.79	27.70	28.39
	8H	22.90	23.74	23.51	24.37	25.07	27.02	27.86	27.63	28.49	29.19
	12H	23.12	23.89	23.76	24.54	25.25	27.98	28.74	28.61	29.40	30.11
8H	4H	22.80	23.64	23.41	24.27	24.97	24.99	25.83	25.60	26.46	27.16
	6H	23.86	24.58	24.50	25.24	25.95	26.84	27.56	27.49	28.23	28.94
	8H	24.32	24.96	24.97	25.64	26.36	27.88	28.53	28.54	29.21	29.93
	12H	24.72	25.30	25.38	25.96	26.75	29.09	29.67	29.75	30.34	31.12
12H	4H	23.06	23.83	23.70	24.48	25.19	25.04	25.81	25.68	26.46	27.17
	6H	24.29	24.94	24.95	25.61	26.34	26.97	27.62	27.63	28.30	29.02
	8H	24.91	25.49	25.57	26.15	26.94	28.13	28.71	28.79	29.37	30.15