

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: P997595

Luminaire Tested: SA2XXDP-B485DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997595
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-B485DB27-4F0-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

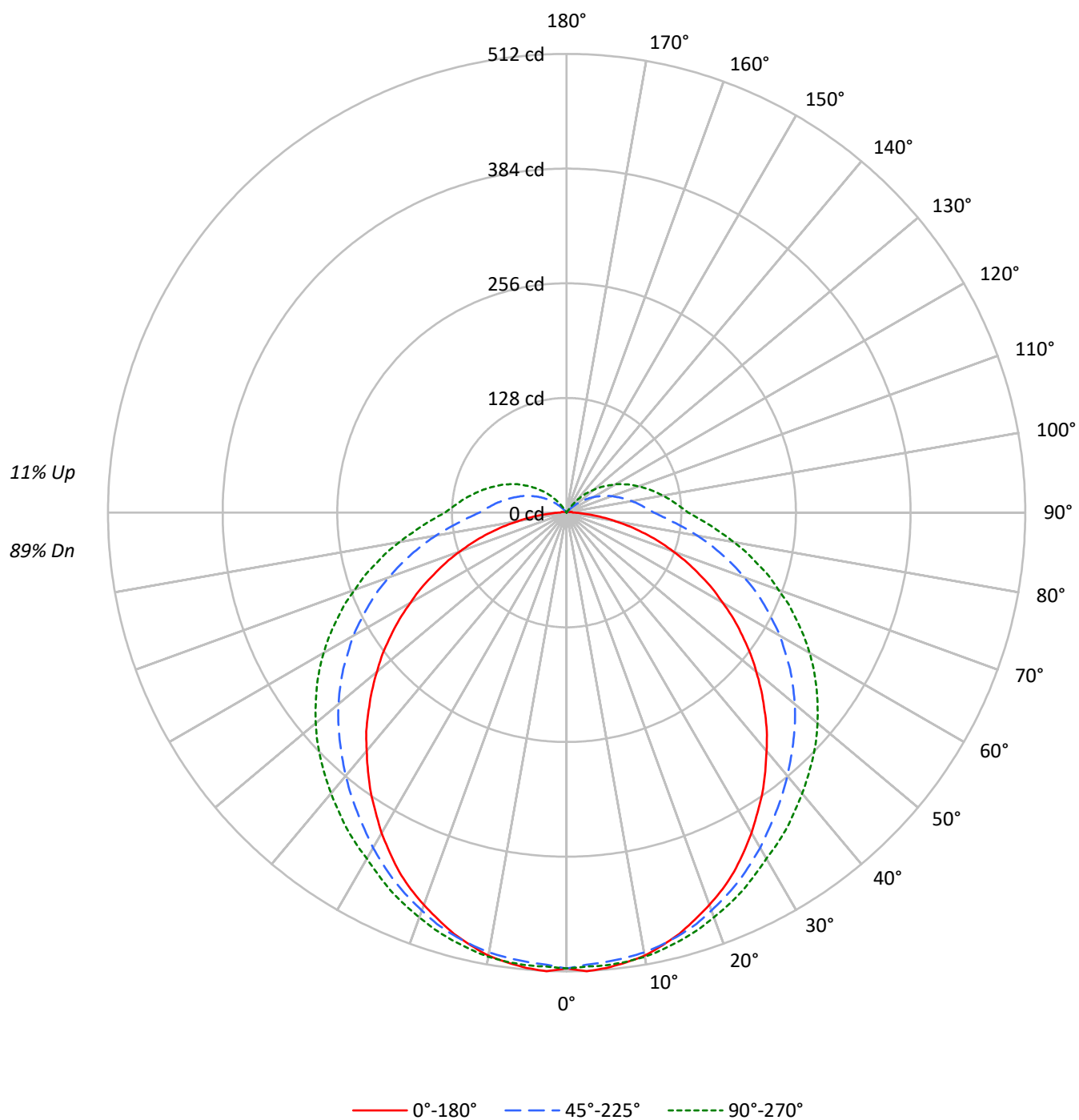
Lumens per Lamp: N/A
Luminaire Lumens: 1941.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	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°	8052	8052	8052
5°	8107	8000	8059
10°	8070	8011	8093
15°	7974	7999	8094
20°	7848	7961	8097
25°	7725	7931	8125
30°	7547	7896	8152
35°	7366	7878	8292
40°	7174	7922	8456
45°	6998	8021	8697
50°	6809	8188	9006
55°	6612	8403	9400
60°	6373	8706	9919
65°	6131	9113	10604
70°	5869	9761	11635
75°	5547	10954	13480
80°	5041	13510	17274
85°	4813	21686	29186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 53491 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	2.5
10°-20°	138.3	7.1
20°-30°	209.6	10.8
30°-40°	255.2	13.1
40°-50°	274.6	14.1
50°-60°	266.6	13.7
60°-70°	232.9	12.0
70°-80°	179.2	9.2
80°-90°	120.0	6.2
90°-100°	82.8	4.3
100°-110°	60.5	3.1
110°-120°	39.9	2.1
120°-130°	22.2	1.1
130°-140°	9.3	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°	396.1	20.4
0°-40°	651.3	33.6
0°-60°	1192.5	61.4
0°-90°	1724.6	88.9
90°-120°	183.2	9.4
90°-150°	216.4	11.1
90°-180°	216.0	11.1
0°-180°	1941.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	510	508	504	508	507	48
15°	487	488	488	495	494	137
25°	442	448	454	463	465	203
35°	381	394	408	424	429	238
45°	313	332	358	381	388	241
55°	240	266	304	331	341	214
65°	164	200	243	274	283	163
75°	91	132	179	211	220	96
85°	26	72	119	150	161	28
90°	7	50	97	127	136	5
95°	6	40	85	113	122	5
105°	4	25	63	89	97	4
115°	3	11	44	66	74	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°	508.7	508.7	508.7	508.7	508.7
2.5°	512.4	510.2	505.0	508.7	507.2
5°	510.2	508.0	503.5	508.0	507.2
7.5°	506.5	505.0	501.3	506.5	505.7
10°	502.1	500.6	498.4	504.3	503.5
12.5°	494.7	495.4	493.9	499.8	499.1
15°	486.6	488.1	488.1	494.7	493.9
17.5°	476.3	479.2	481.4	488.1	488.1
20°	465.9	469.6	472.6	480.7	480.7
22.5°	454.9	459.3	463.7	471.8	473.3
25°	442.3	447.5	454.1	463.0	465.2
27.5°	427.6	435.7	443.1	454.1	455.6
30°	412.9	422.4	432.0	443.8	446.0
32.5°	396.6	407.7	419.5	433.5	437.9
35°	381.2	393.7	407.7	423.9	429.1
37.5°	364.2	378.2	395.9	413.6	418.8
40°	347.2	363.5	383.4	402.5	409.2
42.5°	331.0	347.2	370.8	392.2	398.8
45°	312.6	332.5	358.3	381.2	388.5
47.5°	294.9	316.3	345.8	369.4	377.5
50°	276.5	299.3	332.5	357.6	365.7
52.5°	258.8	283.1	318.5	344.3	353.1
55°	239.6	266.1	304.5	331.0	340.6
57.5°	221.2	250.7	289.0	317.7	327.3
60°	201.3	233.0	275.0	303.0	313.3
62.5°	183.6	216.7	258.8	289.0	298.6
65°	163.7	199.8	243.3	273.5	283.1
67.5°	146.0	183.6	227.8	258.0	268.4
70°	126.8	165.1	210.9	242.6	251.4
72.5°	109.1	148.9	195.4	226.3	237.4
75°	90.7	132.0	179.1	210.9	220.4
77.5°	73.0	115.7	163.7	195.4	205.7
80°	55.3	100.3	148.2	179.1	189.5
82.5°	40.5	84.8	133.4	164.4	174.0
85°	26.5	72.2	119.4	150.4	160.7
87.5°	16.2	60.5	107.6	137.9	147.4
90°	7.4	50.1	97.3	126.8	135.7
92.5°	6.6	45.7	90.7	119.4	128.3
95°	5.9	40.5	84.8	112.8	121.6
97.5°	5.2	36.9	79.6	106.9	115.7
100°	5.2	32.4	73.7	101.0	109.1
102.5°	4.4	28.8	68.6	95.1	103.2
105°	3.7	25.1	63.4	89.2	97.3
107.5°	3.7	21.4	58.2	83.3	91.4
110°	2.9	17.7	53.8	77.4	85.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	14.7	48.7	72.2	80.4
115°	2.9	11.1	44.2	66.4	74.5
117.5°	2.2	8.1	39.1	61.2	68.6
120°	2.2	5.2	34.7	55.3	63.4
122.5°	2.2	2.9	30.2	50.1	56.8
125°	1.5	1.5	25.1	45.0	51.6
127.5°	1.5	0.7	20.6	39.1	45.7
130°	1.5	0.7	16.2	33.9	39.8
132.5°	1.5	0.7	11.8	28.8	34.7
135°	0.7	0.7	8.1	23.6	29.5
137.5°	0.7	0.7	4.4	18.4	23.6
140°	0.7	0.0	1.5	13.3	17.7
142.5°	0.7	0.0	0.0	8.8	12.5
145°	0.0	0.0	0.0	4.4	8.1
147.5°	0.0	0.0	0.0	0.7	2.9
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	17.64	19.12	18.17	19.65	20.23	19.49	20.97	20.01	21.50	22.07
	3H	19.52	20.87	20.06	21.41	22.03	22.15	23.50	22.69	24.04	24.65
	4H	20.25	21.53	20.81	22.09	22.72	23.45	24.74	24.01	25.29	25.92
	6H	20.81	22.01	21.38	22.57	23.22	24.83	26.03	25.40	26.59	27.24
	8H	21.00	22.15	21.59	22.74	23.39	25.55	26.70	26.13	27.29	27.94
	12H	21.15	22.25	21.74	22.84	23.52	26.37	27.47	26.96	28.05	28.73
4H	2H	18.76	20.05	19.32	20.60	21.23	20.12	21.40	20.67	21.95	22.58
	3H	20.94	22.04	21.51	22.63	23.28	23.05	24.15	23.63	24.75	25.40
	4H	21.86	22.87	22.45	23.47	24.15	24.57	25.58	25.16	26.18	26.86
	6H	22.61	23.50	23.22	24.13	24.82	26.17	27.06	26.78	27.69	28.38
	8H	22.89	23.73	23.50	24.36	25.06	27.01	27.85	27.62	28.48	29.18
	12H	23.11	23.88	23.75	24.53	25.24	27.97	28.73	28.60	29.39	30.10
8H	4H	22.79	23.63	23.40	24.26	24.96	24.98	25.82	25.59	26.45	27.15
	6H	23.85	24.56	24.49	25.23	25.94	26.83	27.55	27.48	28.22	28.93
	8H	24.31	24.95	24.96	25.63	26.35	27.87	28.52	28.53	29.20	29.92
	12H	24.71	25.29	25.37	25.95	26.74	29.08	29.66	29.74	30.33	31.11
12H	4H	23.05	23.82	23.69	24.47	25.18	25.03	25.80	25.67	26.45	27.16
	6H	24.28	24.93	24.94	25.60	26.32	26.96	27.61	27.62	28.29	29.01
	8H	24.90	25.48	25.56	26.14	26.93	28.12	28.69	28.78	29.36	30.14