

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: P997535

Luminaire Tested: SA2XXDP-B1005DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997535
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-B1005DB27-4F0-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

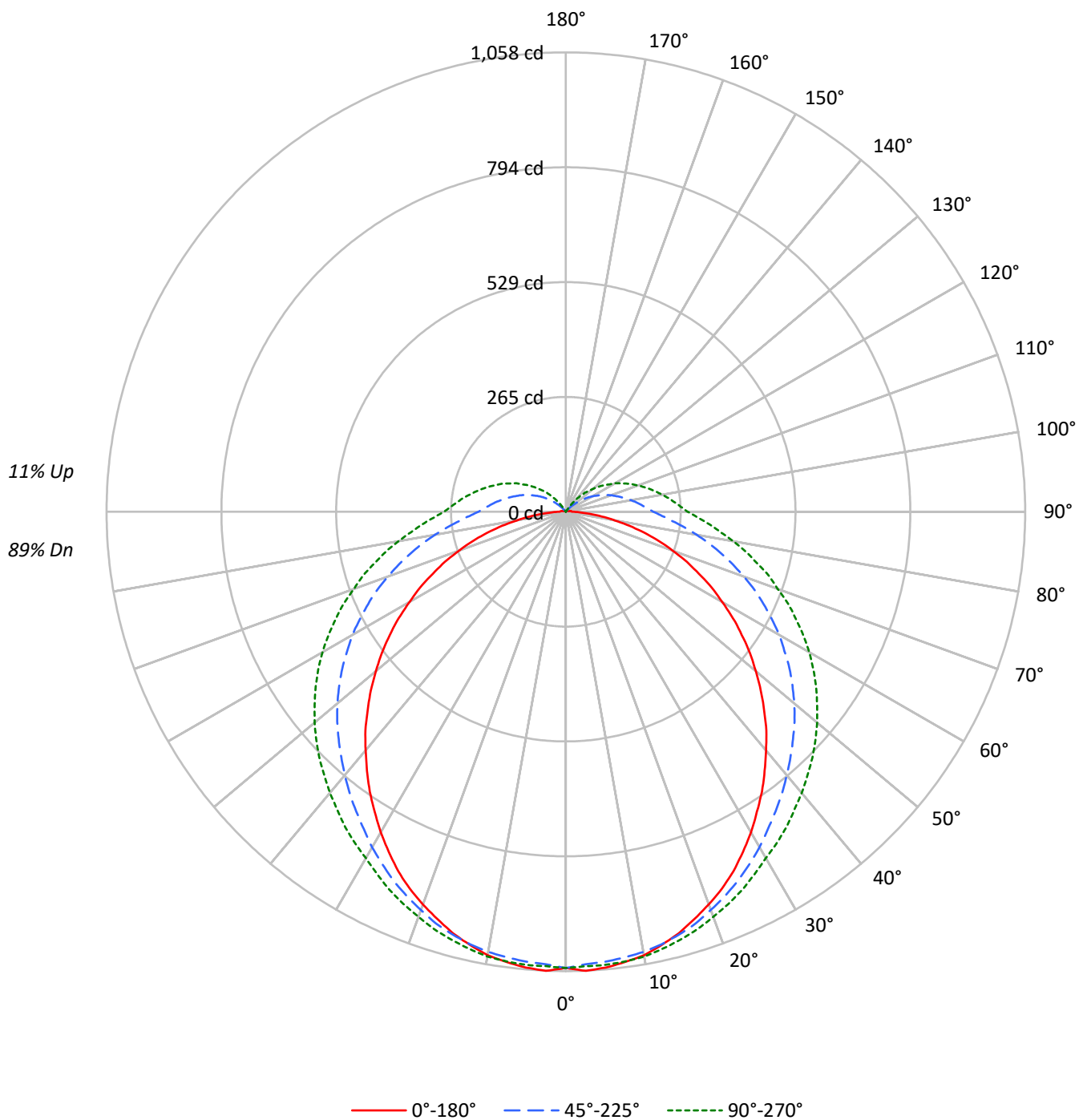
Lumens per Lamp: N/A
Luminaire Lumens: 4009.0 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 61.3
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

TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

Luminous Intensity Polar Plot



TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

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°	16632	16632	16632
5°	16743	16525	16646
10°	16668	16546	16716
15°	16470	16519	16719
20°	16212	16443	16724
25°	15957	16383	16781
30°	15586	16310	16838
35°	15212	16273	17125
40°	14820	16361	17463
45°	14452	16566	17965
50°	14061	16911	18600
55°	13658	17356	19415
60°	13160	17982	20489
65°	12660	18821	21900
70°	12121	20156	24029
75°	11455	22629	27846
80°	10410	27903	35670
85°	9953	44806	60298

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 110502 cd/sqm

TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.6	2.5
10°-20°	285.7	7.1
20°-30°	432.8	10.8
30°-40°	527.1	13.1
40°-50°	567.1	14.1
50°-60°	550.7	13.7
60°-70°	481.0	12.0
70°-80°	370.2	9.2
80°-90°	247.9	6.2
90°-100°	171.0	4.3
100°-110°	124.9	3.1
110°-120°	82.5	2.1
120°-130°	45.9	1.1
130°-140°	19.3	0.5
140°-150°	3.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	818.1	20.4
0°-40°	1345.2	33.6
0°-60°	2463.0	61.4
0°-90°	3562.1	88.9
90°-120°	378.4	9.4
90°-150°	446.9	11.1
90°-180°	447.0	11.1
0°-180°	4009.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1051	1051	1051	1051	1051	
5°	1054	1049	1040	1049	1048	100
15°	1005	1008	1008	1022	1020	283
25°	914	924	938	956	961	420
35°	787	813	842	876	886	492
45°	646	687	740	787	802	498
55°	495	550	629	684	704	443
65°	338	413	502	565	585	336
75°	187	273	370	436	455	198
85°	55	149	247	311	332	58
90°	15	104	201	262	280	11
95°	12	84	175	233	251	10
105°	8	52	131	184	201	9
115°	6	23	91	137	154	6
125°	3	3	52	93	107	3
135°	2	2	17	49	61	2
145°	0	0	0	9	17	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

TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1050.7	1050.7	1050.7	1050.7	1050.7
2.5°	1058.3	1053.7	1043.1	1050.7	1047.6
5°	1053.7	1049.2	1040.0	1049.2	1047.6
7.5°	1046.1	1043.1	1035.4	1046.1	1044.6
10°	1037.0	1033.9	1029.4	1041.5	1040.0
12.5°	1021.7	1023.3	1020.2	1032.4	1030.9
15°	1005.0	1008.0	1008.0	1021.7	1020.2
17.5°	983.7	989.8	994.3	1008.0	1008.0
20°	962.4	970.0	976.1	992.8	992.8
22.5°	939.5	948.7	957.8	974.5	977.6
25°	913.6	924.3	938.0	956.3	960.8
27.5°	883.2	899.9	915.2	938.0	941.0
30°	852.7	872.5	892.3	916.7	921.2
32.5°	819.2	842.1	866.4	895.4	904.5
35°	787.2	813.1	842.1	875.6	886.2
37.5°	752.2	781.2	817.7	854.2	864.9
40°	717.2	750.7	791.8	831.4	845.1
42.5°	683.7	717.2	765.9	810.1	823.8
45°	645.6	686.7	740.0	787.2	802.5
47.5°	609.1	653.2	714.2	762.9	779.6
50°	571.0	618.2	686.7	738.5	755.3
52.5°	534.5	584.7	657.8	711.1	729.4
55°	494.9	549.7	628.9	683.7	703.5
57.5°	456.8	517.7	596.9	656.3	676.1
60°	415.7	481.2	568.0	625.8	647.2
62.5°	379.2	447.7	534.5	596.9	616.7
65°	338.0	412.7	502.5	564.9	584.7
67.5°	301.5	379.2	470.5	533.0	554.3
70°	261.9	341.1	435.5	501.0	519.2
72.5°	225.4	307.6	403.5	467.5	490.3
75°	187.3	272.6	370.0	435.5	455.3
77.5°	150.7	239.1	338.0	403.5	424.8
80°	114.2	207.1	306.1	370.0	391.3
82.5°	83.7	175.1	275.6	339.6	359.4
85°	54.8	149.2	246.7	310.6	332.0
87.5°	33.5	124.9	222.3	284.7	304.5
90°	15.2	103.5	201.0	261.9	280.2
92.5°	13.7	94.4	187.3	246.7	265.0
95°	12.2	83.7	175.1	233.0	251.2
97.5°	10.7	76.1	164.5	220.8	239.1
100°	10.7	67.0	152.3	208.6	225.4
102.5°	9.1	59.4	141.6	196.4	213.2
105°	7.6	51.8	131.0	184.2	201.0
107.5°	7.6	44.2	120.3	172.1	188.8
110°	6.1	36.5	111.2	159.9	176.6



TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.1	30.5	100.5	149.2	166.0
115°	6.1	22.8	91.4	137.0	153.8
117.5°	4.6	16.7	80.7	126.4	141.6
120°	4.6	10.7	71.6	114.2	131.0
122.5°	4.6	6.1	62.4	103.5	117.2
125°	3.0	3.0	51.8	92.9	106.6
127.5°	3.0	1.5	42.6	80.7	94.4
130°	3.0	1.5	33.5	70.0	82.2
132.5°	3.0	1.5	24.4	59.4	71.6
135°	1.5	1.5	16.7	48.7	60.9
137.5°	1.5	1.5	9.1	38.1	48.7
140°	1.5	0.0	3.0	27.4	36.5
142.5°	1.5	0.0	0.0	18.3	25.9
145°	0.0	0.0	0.0	9.1	16.7
147.5°	0.0	0.0	0.0	1.5	6.1
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

TEST NUMBER: P997535

CATALOG NUMBER: SA2XXDP-B1005DB27-4F0-XX-W2A-D

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	20.16	21.64	20.68	22.17	22.75	22.01	23.49	22.53	24.02	24.60
	3H	22.04	23.39	22.58	23.93	24.55	24.67	26.02	25.21	26.56	27.17
	4H	22.77	24.05	23.33	24.61	25.24	25.97	27.26	26.53	27.81	28.44
	6H	23.33	24.53	23.90	25.09	25.74	27.35	28.55	27.92	29.11	29.76
	8H	23.52	24.67	24.11	25.26	25.91	28.07	29.22	28.65	29.81	30.46
	12H	23.67	24.77	24.26	25.36	26.04	28.89	29.99	29.48	30.57	31.25
4H	2H	21.28	22.57	21.84	23.12	23.75	22.64	23.92	23.20	24.47	25.10
	3H	23.46	24.56	24.03	25.15	25.80	25.57	26.67	26.15	27.27	27.92
	4H	24.38	25.39	24.97	25.99	26.67	27.09	28.10	27.68	28.70	29.38
	6H	25.13	26.02	25.74	26.65	27.34	28.69	29.58	29.30	30.21	30.90
	8H	25.41	26.25	26.02	26.88	27.58	29.53	30.37	30.14	31.00	31.70
	12H	25.63	26.40	26.27	27.05	27.76	30.49	31.25	31.12	31.91	32.62
8H	4H	25.31	26.15	25.92	26.78	27.48	27.50	28.34	28.11	28.97	29.67
	6H	26.37	27.08	27.01	27.75	28.46	29.35	30.07	30.00	30.74	31.45
	8H	26.83	27.47	27.48	28.15	28.87	30.39	31.04	31.05	31.72	32.44
	12H	27.23	27.81	27.89	28.47	29.26	31.60	32.18	32.26	32.85	33.63
12H	4H	25.57	26.34	26.21	26.99	27.70	27.55	28.32	28.19	28.97	29.68
	6H	26.80	27.45	27.46	28.12	28.84	29.48	30.13	30.14	30.81	31.53
	8H	27.42	28.00	28.08	28.66	29.45	30.64	31.21	31.30	31.88	32.66