

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: P997603

Luminaire Tested: SA2XXDP-B485DB2750-4F0-XX-W2A-D_3000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997603
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-B485DB2750-4F0-XX-W2A-D_3000K
Description: Define 2 Direct Recessed with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

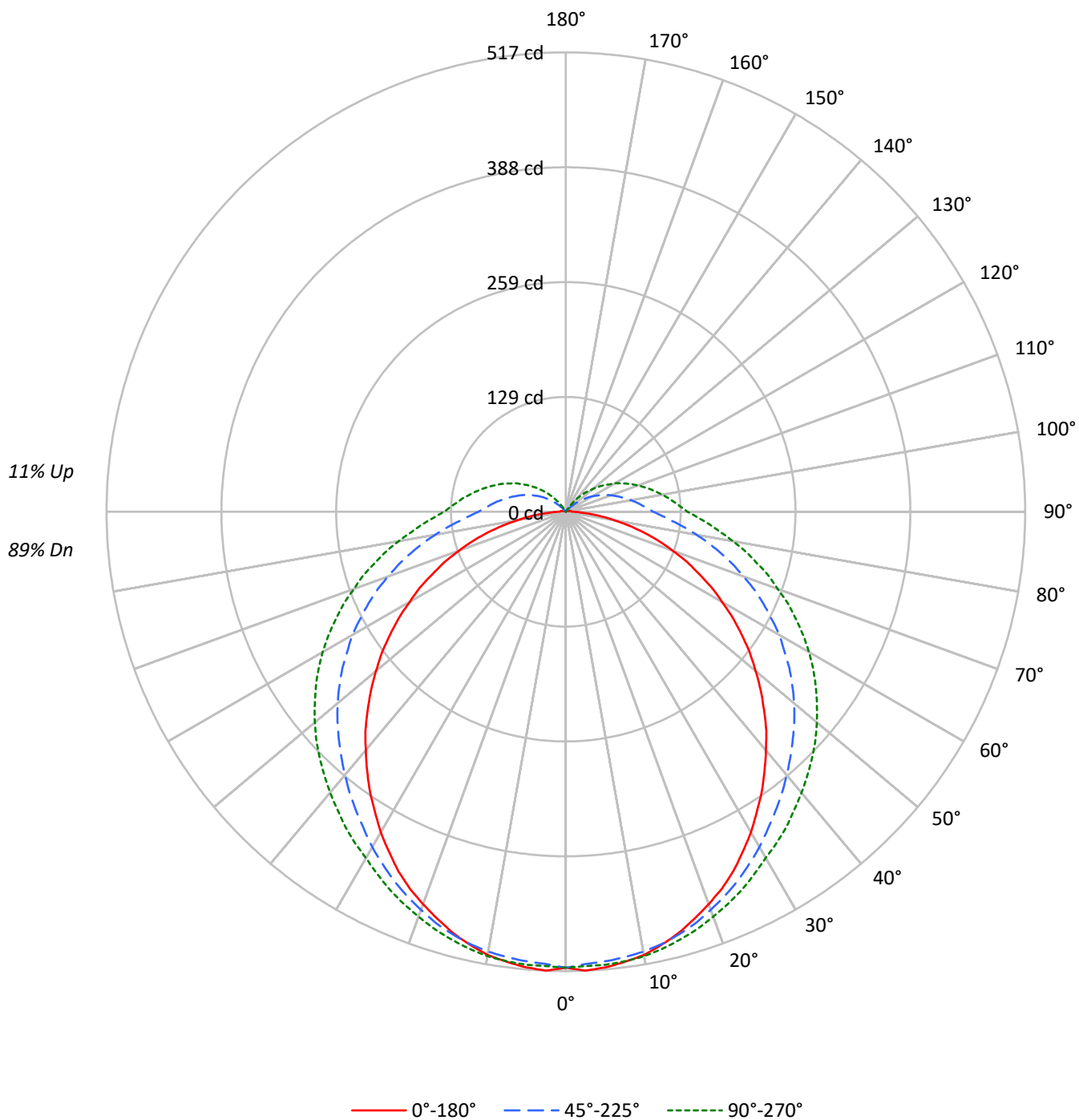
Lumens per Lamp: N/A
Luminaire Lumens: 1958.0 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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°	8122	8122	8122
5°	8177	8070	8131
10°	8141	8080	8164
15°	8043	8068	8166
20°	7917	8030	8168
25°	7793	8001	8197
30°	7613	7966	8223
35°	7430	7948	8363
40°	7238	7991	8530
45°	7058	8090	8773
50°	6868	8260	9085
55°	6670	8475	9483
60°	6427	8782	10007
65°	6184	9192	10697
70°	5919	9844	11737
75°	5596	11052	13602
80°	5087	13628	17420
85°	4867	21885	29441

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 53963 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.6	2.5
10°-20°	139.5	7.1
20°-30°	211.4	10.8
30°-40°	257.4	13.1
40°-50°	277.0	14.1
50°-60°	269.0	13.7
60°-70°	234.9	12.0
70°-80°	180.8	9.2
80°-90°	121.1	6.2
90°-100°	83.5	4.3
100°-110°	61.0	3.1
110°-120°	40.3	2.1
120°-130°	22.4	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°	399.6	20.4
0°-40°	657.0	33.6
0°-60°	1202.9	61.4
0°-90°	1739.7	88.9
90°-120°	184.8	9.4
90°-150°	218.3	11.1
90°-180°	218.0	11.1
0°-180°	1958.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	513	513	513	513	513	
5°	515	512	508	512	512	49
15°	491	492	492	499	498	138
25°	446	451	458	467	469	205
35°	384	397	411	428	433	240
45°	315	335	361	384	392	243
55°	242	268	307	334	344	216
65°	165	202	245	276	286	164
75°	92	133	181	213	222	97
85°	27	73	120	152	162	28
90°	7	51	98	128	137	5
95°	6	41	86	114	123	5
105°	4	25	64	90	98	4
115°	3	11	45	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°	513.1	513.1	513.1	513.1	513.1
2.5°	516.9	514.6	509.4	513.1	511.7
5°	514.6	512.4	507.9	512.4	511.7
7.5°	510.9	509.4	505.7	510.9	510.2
10°	506.5	505.0	502.7	508.7	507.9
12.5°	499.0	499.8	498.3	504.2	503.5
15°	490.8	492.3	492.3	499.0	498.3
17.5°	480.4	483.4	485.6	492.3	492.3
20°	470.0	473.7	476.7	484.9	484.9
22.5°	458.9	463.3	467.8	476.0	477.5
25°	446.2	451.4	458.1	467.0	469.3
27.5°	431.3	439.5	447.0	458.1	459.6
30°	416.5	426.1	435.8	447.7	449.9
32.5°	400.1	411.3	423.2	437.3	441.8
35°	384.5	397.1	411.3	427.6	432.8
37.5°	367.4	381.5	399.4	417.2	422.4
40°	350.3	366.6	386.7	406.1	412.8
42.5°	333.9	350.3	374.1	395.6	402.3
45°	315.3	335.4	361.4	384.5	391.9
47.5°	297.5	319.0	348.8	372.6	380.8
50°	278.9	301.9	335.4	360.7	368.9
52.5°	261.0	285.6	321.3	347.3	356.2
55°	241.7	268.5	307.1	333.9	343.6
57.5°	223.1	252.9	291.5	320.5	330.2
60°	203.0	235.0	277.4	305.7	316.1
62.5°	185.2	218.6	261.0	291.5	301.2
65°	165.1	201.5	245.4	275.9	285.6
67.5°	147.3	185.2	229.8	260.3	270.7
70°	127.9	166.6	212.7	244.7	253.6
72.5°	110.1	150.2	197.1	228.3	239.5
75°	91.5	133.1	180.7	212.7	222.4
77.5°	73.6	116.8	165.1	197.1	207.5
80°	55.8	101.1	149.5	180.7	191.1
82.5°	40.9	85.5	134.6	165.8	175.5
85°	26.8	72.9	120.5	151.7	162.1
87.5°	16.4	61.0	108.6	139.1	148.7
90°	7.4	50.6	98.2	127.9	136.8
92.5°	6.7	46.1	91.5	120.5	129.4
95°	5.9	40.9	85.5	113.8	122.7
97.5°	5.2	37.2	80.3	107.8	116.8
100°	5.2	32.7	74.4	101.9	110.1
102.5°	4.5	29.0	69.2	95.9	104.1
105°	3.7	25.3	64.0	90.0	98.2
107.5°	3.7	21.6	58.8	84.0	92.2
110°	3.0	17.8	54.3	78.1	86.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	14.9	49.1	72.9	81.1
115°	3.0	11.2	44.6	66.9	75.1
117.5°	2.2	8.2	39.4	61.7	69.2
120°	2.2	5.2	35.0	55.8	64.0
122.5°	2.2	3.0	30.5	50.6	57.3
125°	1.5	1.5	25.3	45.4	52.1
127.5°	1.5	0.7	20.8	39.4	46.1
130°	1.5	0.7	16.4	34.2	40.2
132.5°	1.5	0.7	11.9	29.0	35.0
135°	0.7	0.7	8.2	23.8	29.7
137.5°	0.7	0.7	4.5	18.6	23.8
140°	0.7	0.0	1.5	13.4	17.8
142.5°	0.7	0.0	0.0	8.9	12.6
145°	0.0	0.0	0.0	4.5	8.2
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	17.67	19.15	18.20	19.68	20.26	19.52	21.00	20.04	21.53	22.11
	3H	19.55	20.90	20.09	21.44	22.06	22.18	23.53	22.72	24.07	24.68
	4H	20.28	21.57	20.84	22.12	22.75	23.48	24.77	24.04	25.32	25.95
	6H	20.84	22.04	21.41	22.60	23.25	24.86	26.06	25.43	26.62	27.27
	8H	21.03	22.18	21.62	22.77	23.42	25.58	26.73	26.16	27.32	27.97
	12H	21.18	22.28	21.77	22.87	23.55	26.40	27.50	26.99	28.08	28.76
4H	2H	18.79	20.08	19.35	20.63	21.26	20.15	21.43	20.70	21.98	22.61
	3H	20.97	22.07	21.54	22.66	23.31	23.08	24.18	23.66	24.78	25.43
	4H	21.89	22.90	22.48	23.50	24.18	24.60	25.61	25.19	26.21	26.89
	6H	22.64	23.53	23.25	24.16	24.85	26.20	27.09	26.81	27.72	28.41
	8H	22.92	23.76	23.53	24.39	25.09	27.04	27.88	27.65	28.51	29.21
	12H	23.14	23.91	23.78	24.56	25.27	28.00	28.76	28.63	29.42	30.13
8H	4H	22.82	23.66	23.43	24.29	24.99	25.01	25.85	25.62	26.48	27.18
	6H	23.88	24.59	24.52	25.26	25.97	26.86	27.58	27.51	28.25	28.96
	8H	24.34	24.98	24.99	25.66	26.38	27.90	28.55	28.56	29.23	29.95
	12H	24.74	25.32	25.40	25.98	26.77	29.11	29.69	29.77	30.35	31.14
12H	4H	23.08	23.85	23.72	24.50	25.21	25.06	25.83	25.70	26.48	27.19
	6H	24.31	24.96	24.97	25.63	26.35	26.99	27.64	27.65	28.32	29.04
	8H	24.93	25.51	25.59	26.17	26.96	28.14	28.72	28.81	29.39	30.17