

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1439783

Luminaire Tested: S123DR-H485D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439783
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-H485D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

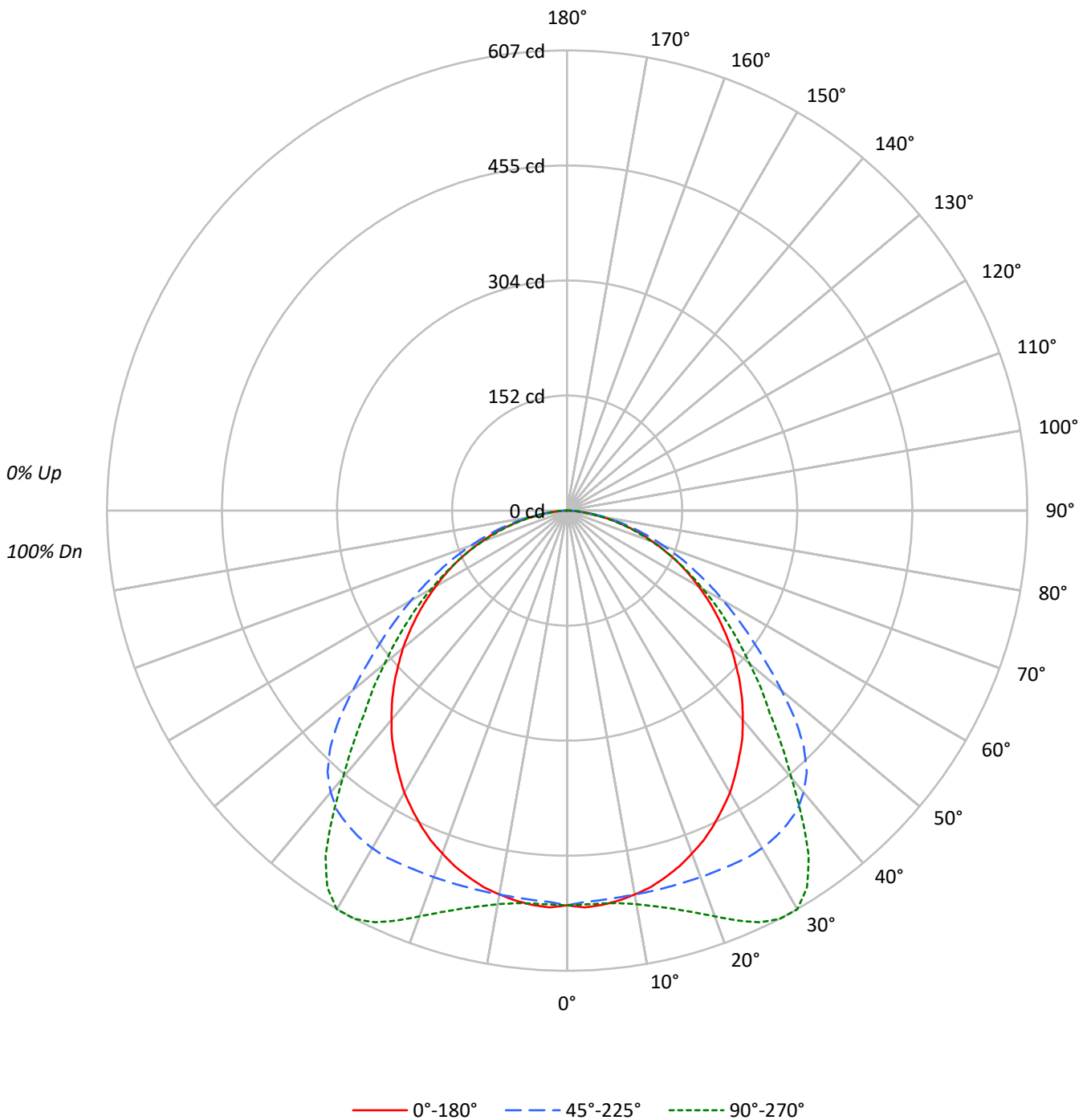
Lumens per Lamp: N/A
Luminaire Lumens: 1574.7 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
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																		
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85																												
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71																												
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60																												
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52																												
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																												
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6277	6277	6277
5°	6320	6242	6294
10°	6295	6295	6453
15°	6250	6418	6788
20°	6175	6604	7308
25°	6087	6854	7971
30°	5981	7158	8455
35°	5824	7441	8177
40°	5669	7635	7237
45°	5499	7528	6445
50°	5302	6927	5897
55°	5070	6270	5421
60°	4830	5739	4984
65°	4593	5252	4607
70°	4251	4762	4174
75°	3838	4239	3736
80°	3215	3548	3062
85°	2462	2601	2310

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7528 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	3.1
10°-20°	147.3	9.4
20°-30°	241.4	15.3
30°-40°	305.4	19.4
40°-50°	298.4	18.9
50°-60°	245.1	15.6
60°-70°	172.9	11.0
70°-80°	92.2	5.9
80°-90°	22.5	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	438.3	27.8
0°-40°	743.7	47.2
0°-60°	1287.2	81.7
0°-90°	1574.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1574.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	522	520	516	521	520	50
15°	501	503	514	537	544	141
25°	458	471	515	578	599	211
35°	396	423	506	564	556	248
45°	322	359	442	398	378	249
55°	241	277	298	268	258	216
65°	161	184	184	168	162	159
75°	82	93	91	82	80	87
85°	18	19	19	17	17	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.6	520.6	520.6	520.6	520.6
2.5°	523.9	522.2	516.9	521.7	520.1
5°	522.2	520.1	515.8	521.2	520.1
7.5°	519.0	517.9	514.7	522.8	522.2
10°	514.2	513.6	514.2	526.0	527.1
12.5°	508.8	509.3	514.2	530.9	534.6
15°	500.7	503.4	514.2	537.3	543.8
17.5°	492.1	496.4	514.2	545.9	555.6
20°	481.3	488.9	514.7	555.1	569.6
22.5°	470.6	479.7	514.7	567.5	585.2
25°	457.6	471.1	515.2	577.7	599.2
27.5°	443.6	459.8	515.8	585.8	607.3
30°	429.6	449.0	514.2	589.0	607.3
32.5°	412.9	436.6	510.9	583.6	589.0
35°	395.7	423.2	505.6	564.2	555.6
37.5°	379.6	408.6	498.6	528.7	508.2
40°	360.2	393.0	485.1	483.5	459.8
42.5°	341.9	376.3	467.9	437.7	418.3
45°	322.5	359.1	441.5	398.4	378.0
47.5°	302.0	340.3	408.1	361.3	346.7
50°	282.7	320.9	369.3	327.3	314.4
52.5°	261.7	300.4	332.2	297.2	285.9
55°	241.2	277.3	298.3	268.1	257.9
57.5°	220.7	254.7	267.0	240.7	232.6
60°	200.3	231.0	238.0	215.4	206.7
62.5°	180.4	208.9	211.0	191.1	183.6
65°	161.0	184.1	184.1	168.0	161.5
67.5°	140.5	160.4	159.4	144.3	140.5
70°	120.6	137.3	135.1	122.8	118.4
72.5°	101.8	114.1	112.5	102.8	98.0
75°	82.4	92.6	91.0	82.4	80.2
77.5°	64.1	71.1	69.5	63.5	61.9
80°	46.3	51.7	51.1	46.8	44.1
82.5°	31.2	33.9	33.4	30.7	29.1
85°	17.8	19.4	18.8	17.2	16.7
87.5°	7.0	8.1	8.6	8.1	7.5
90°	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	18.02	19.63	18.39	19.94	20.25	17.75	19.35	18.11	19.67	19.98
	3H	19.59	21.04	19.97	21.36	21.72	19.26	20.71	19.64	21.04	21.40
	4H	20.14	21.50	20.54	21.85	22.23	19.80	21.16	20.20	21.51	21.88
	6H	20.51	21.77	20.92	22.13	22.52	20.16	21.41	20.57	21.78	22.17
	8H	20.61	21.81	21.03	22.20	22.59	20.25	21.45	20.67	21.84	22.24
	12H	20.66	21.81	21.09	22.19	22.62	20.30	21.45	20.73	21.83	22.26
4H	2H	18.66	20.02	19.06	20.37	20.74	18.45	19.81	18.84	20.15	20.53
	3H	20.47	21.60	20.88	22.00	22.40	20.16	21.30	20.57	21.69	22.09
	4H	21.15	22.18	21.59	22.59	23.03	20.80	21.82	21.23	22.24	22.67
	6H	21.64	22.53	22.09	22.97	23.43	21.26	22.15	21.71	22.59	23.05
	8H	21.77	22.60	22.23	23.05	23.51	21.38	22.22	21.85	22.66	23.13
	12H	21.85	22.60	22.33	23.08	23.55	21.46	22.21	21.95	22.69	23.16
8H	4H	21.42	22.25	21.88	22.70	23.16	21.11	21.94	21.57	22.38	22.85
	6H	22.01	22.70	22.50	23.19	23.67	21.67	22.36	22.16	22.85	23.32
	8H	22.20	22.83	22.71	23.33	23.82	21.85	22.47	22.36	22.97	23.46
	12H	22.34	22.89	22.85	23.39	23.95	21.97	22.52	22.48	23.02	23.58
12H	4H	21.44	22.18	21.92	22.66	23.13	21.13	21.88	21.61	22.36	22.83
	6H	22.04	22.66	22.55	23.17	23.66	21.71	22.33	22.22	22.84	23.33
	8H	22.29	22.84	22.79	23.33	23.89	21.94	22.49	22.45	22.98	23.54