

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: P1439831

Luminaire Tested: S123DR-S485D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439831
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-S485D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

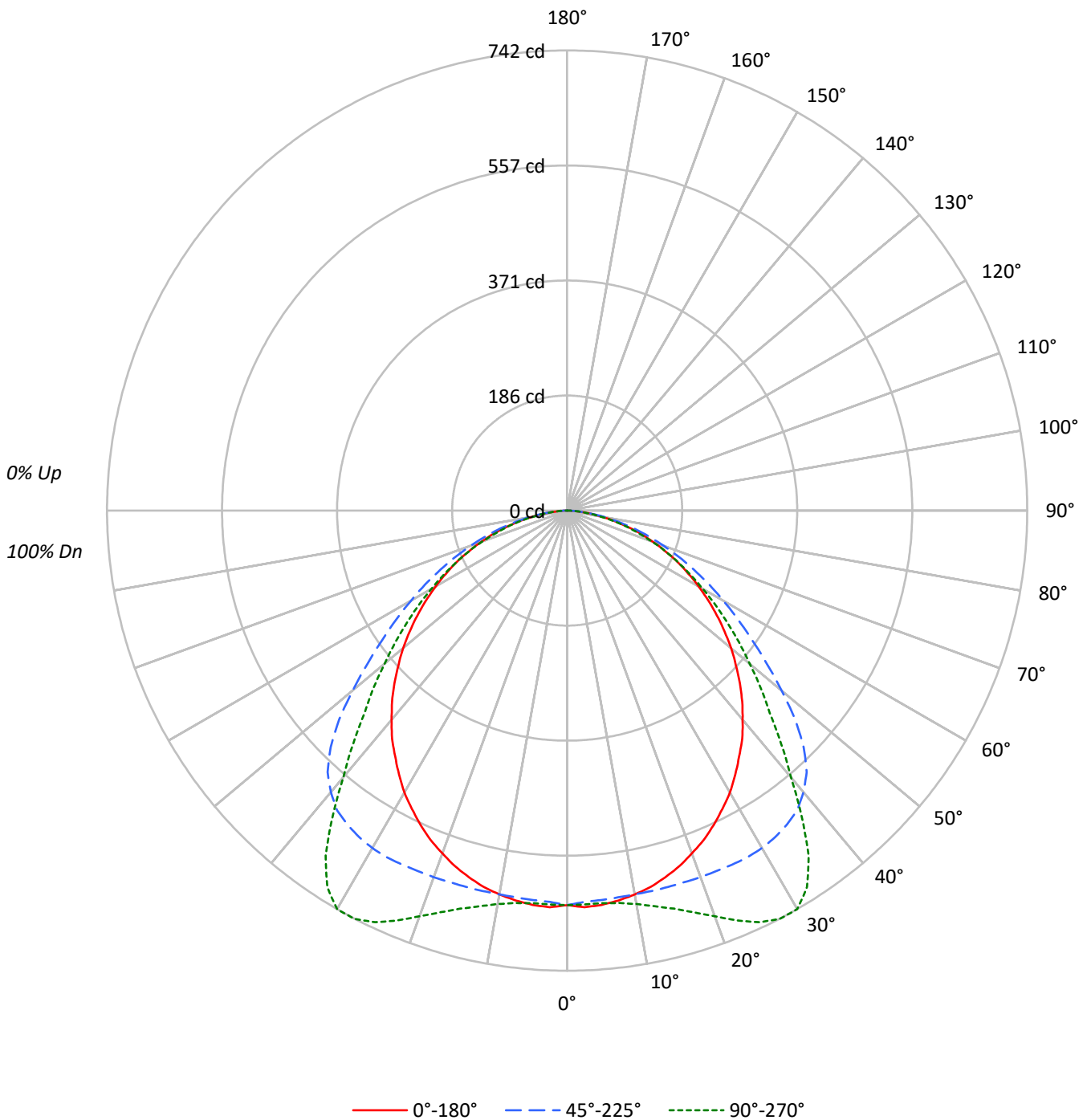
Lumens per Lamp: N/A
Luminaire Lumens: 1924.4 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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				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	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°	7670	7670	7670
5°	7724	7628	7692
10°	7692	7692	7885
15°	7638	7842	8294
20°	7547	8070	8931
25°	7440	8377	9742
30°	7309	8747	10333
35°	7118	9093	9994
40°	6928	9330	8843
45°	6720	9199	7876
50°	6478	8467	7206
55°	6197	7662	6625
60°	5903	7012	6093
65°	5611	6419	5631
70°	5196	5820	5101
75°	4691	5180	4565
80°	3930	4339	3749
85°	3002	3182	2822

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9199 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	3.1
10°-20°	180.0	9.4
20°-30°	295.0	15.3
30°-40°	373.2	19.4
40°-50°	364.6	18.9
50°-60°	299.5	15.6
60°-70°	211.3	11.0
70°-80°	112.6	5.9
80°-90°	27.5	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°	535.6	27.8
0°-40°	908.8	47.2
0°-60°	1573.0	81.7
0°-90°	1924.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1924.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	636	636	636	636	636	
5°	638	636	630	637	636	61
15°	612	615	628	657	664	173
25°	559	576	630	706	732	258
35°	484	517	618	690	679	303
45°	394	439	540	487	462	304
55°	295	339	364	328	315	264
65°	197	225	225	205	197	194
75°	101	113	111	101	98	107
85°	22	24	23	21	20	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	636.2	636.2	636.2	636.2	636.2
2.5°	640.2	638.2	631.6	637.6	635.6
5°	638.2	635.6	630.3	636.9	635.6
7.5°	634.3	632.9	629.0	638.9	638.2
10°	628.3	627.7	628.3	642.8	644.1
12.5°	621.8	622.4	628.3	648.7	653.3
15°	611.9	615.2	628.3	656.6	664.5
17.5°	601.4	606.6	628.3	667.2	679.0
20°	588.2	597.4	629.0	678.3	696.1
22.5°	575.0	586.2	629.0	693.5	715.2
25°	559.3	575.7	629.7	706.0	732.3
27.5°	542.2	561.9	630.3	715.8	742.2
30°	525.0	548.7	628.3	719.8	742.2
32.5°	504.6	533.6	624.4	713.2	719.8
35°	483.6	517.1	617.8	689.5	679.0
37.5°	463.9	499.4	609.3	646.1	621.1
40°	440.2	480.3	592.8	590.8	561.9
42.5°	417.8	459.9	571.8	534.9	511.2
45°	394.1	438.9	539.5	486.9	461.9
47.5°	369.1	415.8	498.7	441.5	423.7
50°	345.4	392.1	451.4	400.0	384.2
52.5°	319.8	367.1	406.0	363.2	349.4
55°	294.8	338.8	364.5	327.7	315.2
57.5°	269.8	311.2	326.3	294.1	284.2
60°	244.8	282.3	290.8	263.2	252.7
62.5°	220.4	255.3	257.9	233.6	224.4
65°	196.7	225.0	225.0	205.3	197.4
67.5°	171.7	196.1	194.8	176.3	171.7
70°	147.4	167.8	165.1	150.0	144.7
72.5°	124.4	139.5	137.5	125.7	119.7
75°	100.7	113.2	111.2	100.7	98.0
77.5°	78.3	86.8	84.9	77.6	75.7
80°	56.6	63.2	62.5	57.2	54.0
82.5°	38.2	41.5	40.8	37.5	35.5
85°	21.7	23.7	23.0	21.1	20.4
87.5°	8.6	9.9	10.5	9.9	9.2
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	18.72	20.32	19.08	20.64	20.95	18.44	20.05	18.81	20.36	20.68
	3H	20.29	21.73	20.66	22.06	22.42	19.96	21.40	20.34	21.73	22.09
	4H	20.84	22.20	21.24	22.55	22.92	20.49	21.85	20.89	22.20	22.58
	6H	21.20	22.46	21.61	22.83	23.22	20.85	22.11	21.26	22.48	22.87
	8H	21.30	22.50	21.73	22.89	23.29	20.95	22.15	21.37	22.54	22.94
	12H	21.36	22.51	21.79	22.89	23.32	21.00	22.15	21.43	22.53	22.96
4H	2H	19.36	20.72	19.75	21.06	21.44	19.14	20.50	19.54	20.85	21.23
	3H	21.16	22.30	21.57	22.70	23.10	20.86	21.99	21.27	22.39	22.79
	4H	21.85	22.88	22.28	23.29	23.73	21.50	22.52	21.93	22.93	23.37
	6H	22.33	23.22	22.79	23.67	24.12	21.95	22.85	22.41	23.29	23.75
	8H	22.47	23.30	22.93	23.74	24.21	22.08	22.92	22.54	23.36	23.82
	12H	22.55	23.30	23.03	23.78	24.25	22.16	22.91	22.64	23.39	23.86
8H	4H	22.12	22.95	22.58	23.39	23.86	21.80	22.64	22.26	23.08	23.55
	6H	22.71	23.40	23.20	23.89	24.36	22.36	23.06	22.86	23.54	24.02
	8H	22.90	23.52	23.41	24.03	24.52	22.54	23.16	23.05	23.67	24.16
	12H	23.04	23.59	23.55	24.08	24.64	22.67	23.22	23.18	23.71	24.27
12H	4H	22.13	22.88	22.61	23.36	23.83	21.83	22.58	22.31	23.05	23.52
	6H	22.74	23.36	23.25	23.87	24.36	22.41	23.03	22.92	23.54	24.02
	8H	22.98	23.53	23.49	24.02	24.59	22.64	23.19	23.14	23.68	24.24