

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: P1439791

Luminaire Tested: S123DR-H675D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439791
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-H675D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

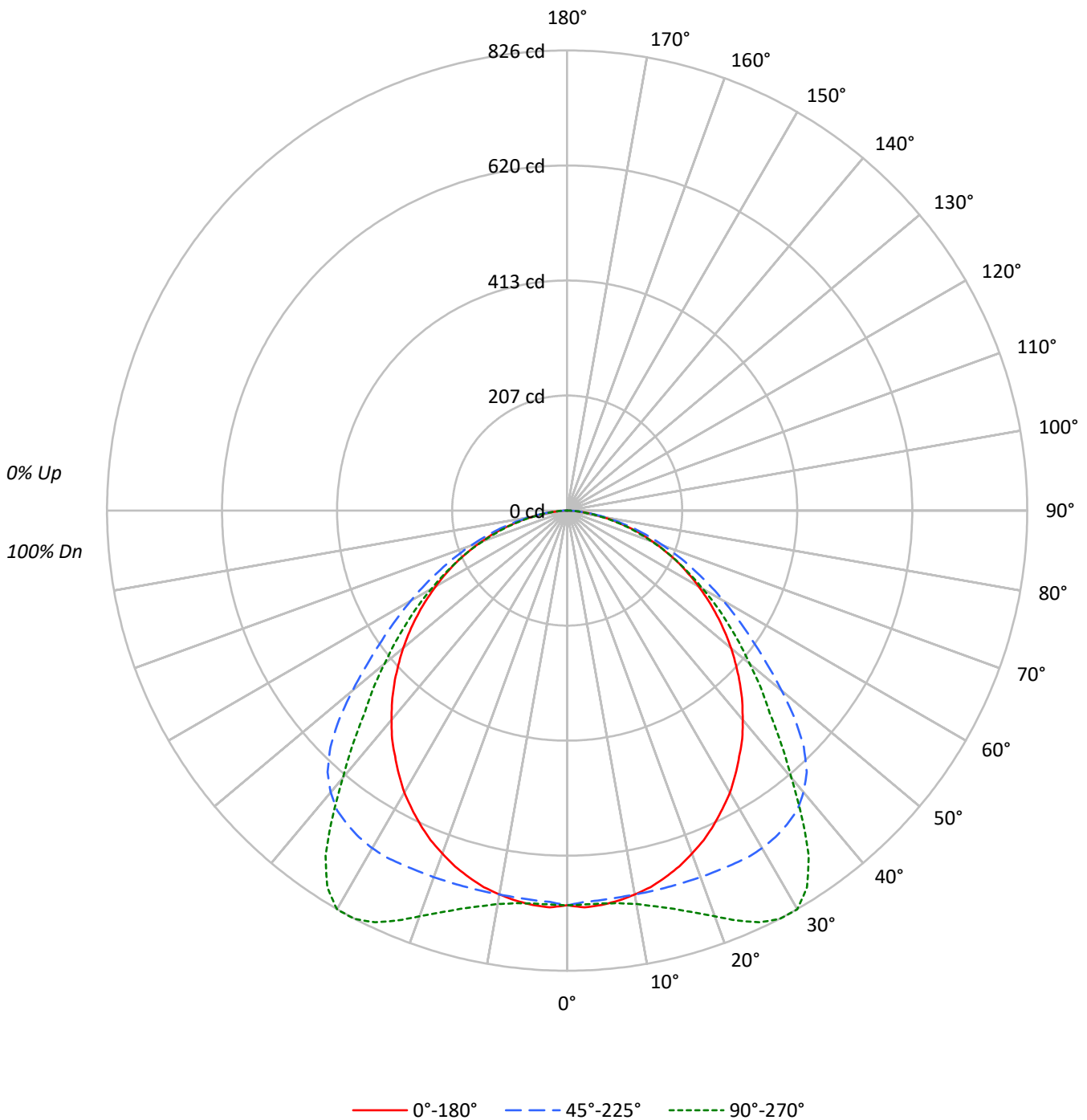
Lumens per Lamp: N/A
Luminaire Lumens: 2142.8 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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

TEST NUMBER: P1439791

CATALOG NUMBER: S123DR-H675D927-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439791

CATALOG NUMBER: S123DR-H675D927-X4F0-XX-UDD-FLB-W

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°	8542	8542	8542
5°	8601	8495	8565
10°	8566	8566	8780
15°	8504	8733	9236
20°	8404	8986	9945
25°	8284	9327	10847
30°	8139	9741	11505
35°	7926	10125	11128
40°	7713	10389	9848
45°	7482	10244	8769
50°	7214	9427	8026
55°	6899	8532	7376
60°	6571	7808	6783
65°	6250	7149	6270
70°	5785	6483	5682
75°	5222	5767	5087
80°	4374	4832	4173
85°	3348	3541	3140

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10244 cd/sqm



TEST NUMBER: P1439791

CATALOG NUMBER: S123DR-H675D927-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	3.1
10°-20°	200.5	9.4
20°-30°	328.5	15.3
30°-40°	415.6	19.4
40°-50°	406.0	18.9
50°-60°	333.5	15.6
60°-70°	235.3	11.0
70°-80°	125.4	5.9
80°-90°	30.6	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°	596.4	27.8
0°-40°	1012.0	47.2
0°-60°	1751.6	81.7
0°-90°	2142.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2142.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	711	708	702	709	708	67
15°	681	685	700	731	740	192
25°	623	641	701	786	815	287
35°	538	576	688	768	756	337
45°	439	489	601	542	514	338
55°	328	377	406	365	351	294
65°	219	251	251	229	220	216
75°	112	126	124	112	109	119
85°	24	26	26	23	23	29
90°	0	0	0	0	0	



TEST NUMBER: P1439791

CATALOG NUMBER: S123DR-H675D927-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	708.5	708.5	708.5	708.5	708.5
2.5°	712.9	710.7	703.3	709.9	707.7
5°	710.7	707.7	701.9	709.2	707.7
7.5°	706.3	704.8	700.4	711.4	710.7
10°	699.7	698.9	699.7	715.8	717.2
12.5°	692.3	693.1	699.7	722.4	727.5
15°	681.3	685.0	699.7	731.2	740.0
17.5°	669.6	675.5	699.7	742.9	756.1
20°	655.0	665.2	700.4	755.3	775.1
22.5°	640.3	652.8	700.4	772.2	796.4
25°	622.7	641.1	701.1	786.1	815.4
27.5°	603.7	625.7	701.9	797.1	826.4
30°	584.6	611.0	699.7	801.5	826.4
32.5°	561.9	594.2	695.3	794.2	801.5
35°	538.5	575.9	687.9	767.8	756.1
37.5°	516.5	556.1	678.4	719.4	691.6
40°	490.1	534.8	660.1	657.9	625.7
42.5°	465.2	512.1	636.7	595.6	569.3
45°	438.8	488.7	600.8	542.1	514.3
47.5°	411.0	463.0	555.3	491.6	471.8
50°	384.6	436.6	502.6	445.4	427.9
52.5°	356.1	408.8	452.0	404.4	389.0
55°	328.2	377.3	405.9	364.9	350.9
57.5°	300.4	346.5	363.4	327.5	316.5
60°	272.5	314.3	323.8	293.1	281.3
62.5°	245.4	284.3	287.2	260.1	249.8
65°	219.1	250.6	250.6	228.6	219.8
67.5°	191.2	218.3	216.9	196.3	191.2
70°	164.1	186.8	183.9	167.0	161.2
72.5°	138.5	155.3	153.1	139.9	133.3
75°	112.1	126.0	123.8	112.1	109.2
77.5°	87.2	96.7	94.5	86.5	84.3
80°	63.0	70.3	69.6	63.7	60.1
82.5°	42.5	46.2	45.4	41.8	39.6
85°	24.2	26.4	25.6	23.4	22.7
87.5°	9.5	11.0	11.7	11.0	10.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439791
 CATALOG NUMBER: S123DR-H675D927-X4F0-XX-UDD-FLB-W

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	19.09	20.69	19.45	21.01	21.32	18.82	20.42	19.18	20.74	21.05
	3H	20.66	22.11	21.04	22.43	22.79	20.33	21.78	20.71	22.11	22.47
	4H	21.21	22.57	21.61	22.92	23.30	20.87	22.23	21.27	22.58	22.95
	6H	21.58	22.83	21.99	23.20	23.59	21.23	22.48	21.64	22.85	23.24
	8H	21.68	22.88	22.10	23.27	23.66	21.32	22.52	21.75	22.91	23.31
	12H	21.73	22.88	22.16	23.26	23.69	21.37	22.52	21.80	22.90	23.33
4H	2H	19.73	21.09	20.13	21.44	21.81	19.52	20.88	19.92	21.22	21.60
	3H	21.54	22.67	21.95	23.07	23.47	21.23	22.37	21.64	22.76	23.16
	4H	22.22	23.25	22.66	23.66	24.10	21.87	22.89	22.30	23.31	23.74
	6H	22.71	23.60	23.16	24.04	24.50	22.33	23.22	22.78	23.66	24.12
	8H	22.84	23.67	23.30	24.12	24.58	22.46	23.29	22.92	23.73	24.20
	12H	22.92	23.67	23.40	24.15	24.62	22.54	23.28	23.02	23.76	24.23
8H	4H	22.49	23.32	22.95	23.77	24.23	22.18	23.01	22.64	23.45	23.92
	6H	23.08	23.77	23.57	24.26	24.74	22.74	23.43	23.23	23.92	24.39
	8H	23.27	23.90	23.78	24.40	24.89	22.92	23.54	23.43	24.05	24.53
	12H	23.41	23.96	23.92	24.46	25.02	23.05	23.60	23.55	24.09	24.65
12H	4H	22.51	23.25	22.99	23.73	24.20	22.20	22.95	22.68	23.43	23.90
	6H	23.11	23.73	23.62	24.24	24.73	22.78	23.40	23.29	23.91	24.40
	8H	23.36	23.91	23.86	24.40	24.96	23.01	23.56	23.52	24.05	24.61