

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: P1439795

Luminaire Tested: S123DR-H675D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439795
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-H675D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

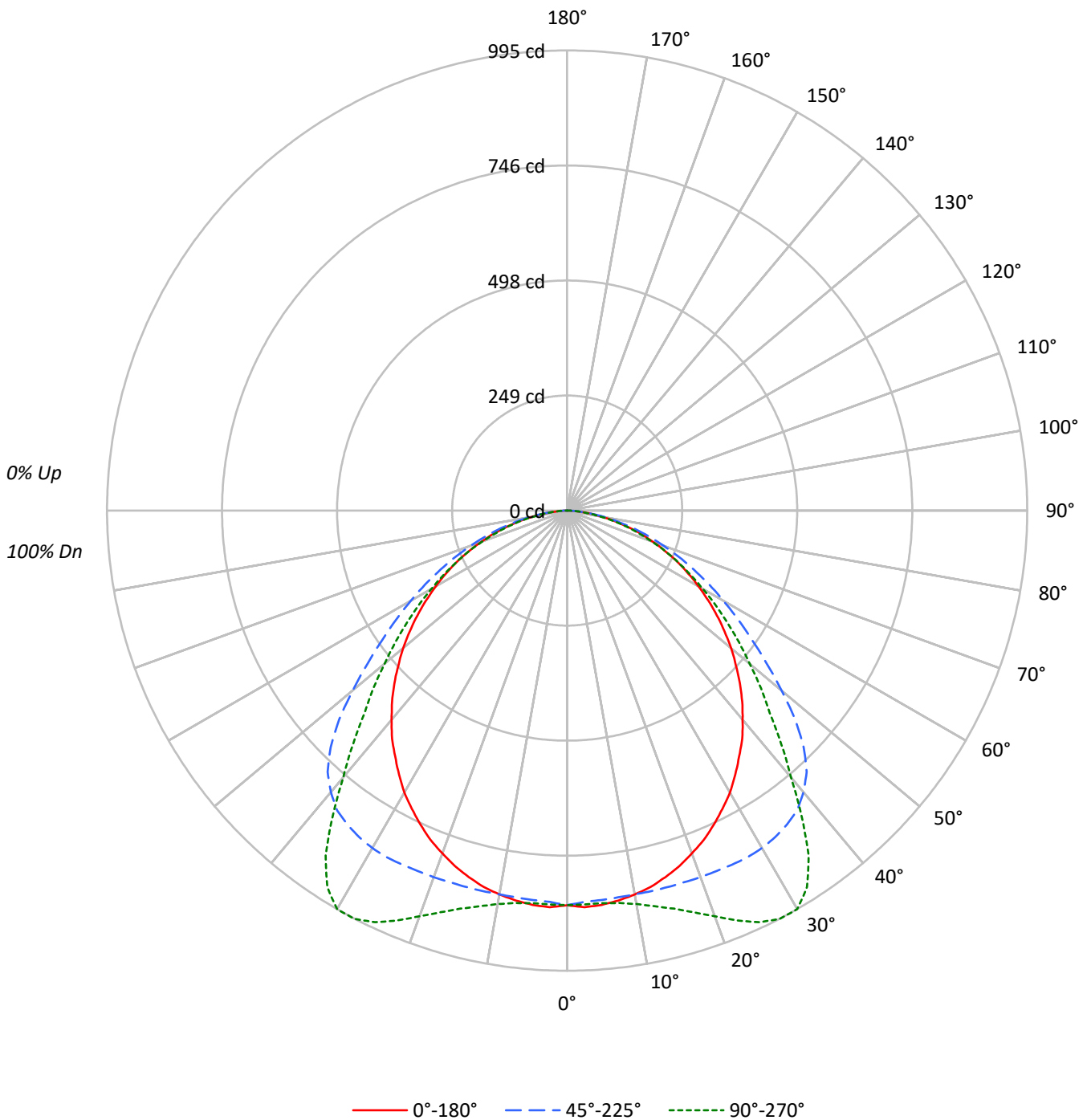
Lumens per Lamp: N/A
Luminaire Lumens: 2580.5 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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°	10287	10287	10287
5°	10357	10229	10315
10°	10315	10315	10575
15°	10241	10517	11122
20°	10120	10822	11977
25°	9976	11233	13063
30°	9802	11730	13855
35°	9545	12194	13401
40°	9290	12511	11859
45°	9011	12336	10561
50°	8688	11353	9665
55°	8309	10274	8883
60°	7914	9404	8169
65°	7526	8607	7551
70°	6966	7808	6842
75°	6289	6945	6126
80°	5270	5818	5020
85°	4025	4274	3790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12336 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.1
10°-20°	241.4	9.4
20°-30°	395.6	15.3
30°-40°	500.5	19.4
40°-50°	489.0	18.9
50°-60°	401.7	15.6
60°-70°	283.3	11.0
70°-80°	151.0	5.9
80°-90°	36.8	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°	718.3	27.8
0°-40°	1218.7	47.2
0°-60°	2109.4	81.7
0°-90°	2580.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2580.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	856	852	845	854	852	81
15°	820	825	843	880	891	231
25°	750	772	844	947	982	345
35°	648	694	828	925	910	406
45°	528	588	724	653	619	407
55°	395	454	489	439	423	354
65°	264	302	302	275	265	260
75°	135	152	149	135	132	143
85°	29	32	31	28	27	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	853.2	853.2	853.2	853.2	853.2
2.5°	858.5	855.8	847.0	854.9	852.3
5°	855.8	852.3	845.2	854.1	852.3
7.5°	850.5	848.8	843.5	856.7	855.8
10°	842.6	841.7	842.6	862.0	863.8
12.5°	833.8	834.6	842.6	869.9	876.1
15°	820.5	824.9	842.6	880.5	891.1
17.5°	806.4	813.5	842.6	894.6	910.5
20°	788.8	801.1	843.5	909.6	933.5
22.5°	771.1	786.1	843.5	929.9	959.0
25°	749.9	772.0	844.4	946.7	982.0
27.5°	727.0	753.5	845.2	959.9	995.2
30°	704.1	735.8	842.6	965.2	995.2
32.5°	676.7	715.5	837.3	956.4	965.2
35°	648.5	693.5	828.5	924.6	910.5
37.5°	622.0	669.7	817.0	866.4	832.9
40°	590.3	644.1	794.9	792.3	753.5
42.5°	560.3	616.7	766.7	717.3	685.5
45°	528.5	588.5	723.5	652.9	619.4
47.5°	495.0	557.6	668.8	592.0	568.2
50°	463.2	525.8	605.3	536.4	515.3
52.5°	428.8	492.3	544.4	487.0	468.5
55°	395.3	454.4	488.8	439.4	422.6
57.5°	361.7	417.3	437.6	394.4	381.1
60°	328.2	378.5	390.0	352.9	338.8
62.5°	295.6	342.3	345.9	313.2	300.9
65°	263.8	301.7	301.7	275.3	264.7
67.5°	230.3	262.9	261.2	236.5	230.3
70°	197.6	225.0	221.5	201.2	194.1
72.5°	166.8	187.0	184.4	168.5	160.6
75°	135.0	151.8	149.1	135.0	131.5
77.5°	105.0	116.5	113.8	104.1	101.5
80°	75.9	84.7	83.8	76.8	72.3
82.5°	51.2	55.6	54.7	50.3	47.6
85°	29.1	31.8	30.9	28.2	27.4
87.5°	11.5	13.2	14.1	13.2	12.4
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	19.74	21.34	20.10	21.65	21.97	19.46	21.07	19.83	21.38	21.70
	3H	21.31	22.75	21.68	23.08	23.44	20.98	22.42	21.36	22.75	23.11
	4H	21.86	23.22	22.26	23.57	23.94	21.51	22.87	21.91	23.22	23.60
	6H	22.22	23.48	22.63	23.85	24.24	21.87	23.13	22.28	23.50	23.89
	8H	22.32	23.52	22.75	23.91	24.31	21.97	23.17	22.39	23.56	23.96
	12H	22.38	23.53	22.81	23.91	24.34	22.02	23.17	22.45	23.55	23.98
4H	2H	20.37	21.73	20.77	22.08	22.46	20.16	21.52	20.56	21.87	22.25
	3H	22.18	23.32	22.59	23.71	24.11	21.88	23.01	22.29	23.41	23.81
	4H	22.87	23.89	23.30	24.31	24.74	22.52	23.54	22.95	23.95	24.39
	6H	23.35	24.24	23.81	24.69	25.14	22.97	23.87	23.43	24.31	24.77
	8H	23.49	24.32	23.95	24.76	25.23	23.10	23.94	23.56	24.38	24.84
	12H	23.57	24.32	24.05	24.80	25.27	23.18	23.93	23.66	24.41	24.88
8H	4H	23.13	23.97	23.60	24.41	24.88	22.82	23.66	23.28	24.10	24.57
	6H	23.73	24.42	24.22	24.91	25.38	23.38	24.08	23.88	24.56	25.04
	8H	23.92	24.54	24.43	25.05	25.54	23.56	24.18	24.07	24.69	25.18
	12H	24.06	24.61	24.57	25.10	25.66	23.69	24.24	24.20	24.73	25.29
12H	4H	23.15	23.90	23.63	24.38	24.85	22.85	23.60	23.33	24.07	24.54
	6H	23.76	24.38	24.27	24.89	25.37	23.43	24.05	23.94	24.56	25.04
	8H	24.00	24.55	24.51	25.04	25.60	23.66	24.21	24.16	24.70	25.26