

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: P1439788

Luminaire Tested: S123DR-H675D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439788
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-H675D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

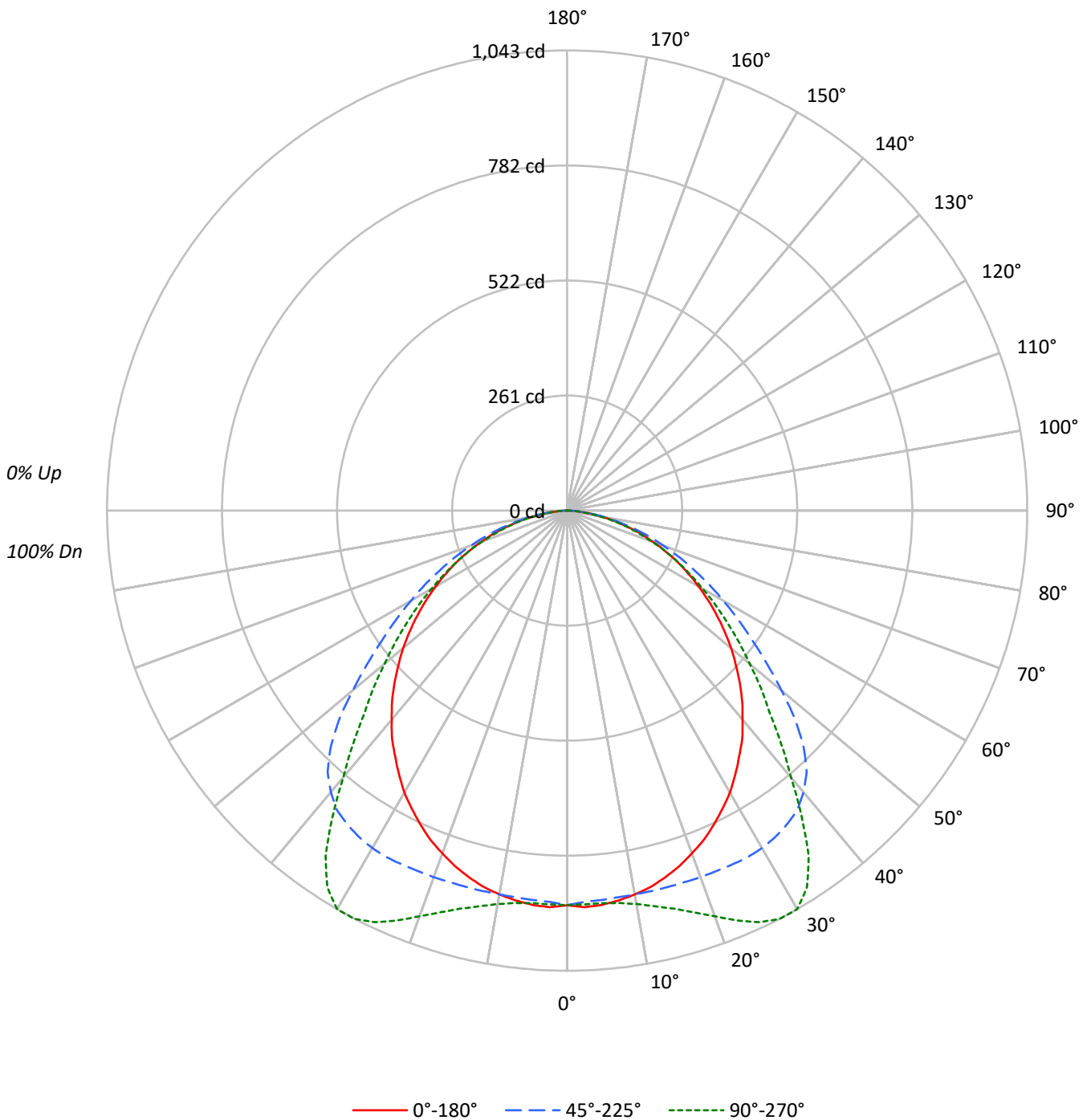
Lumens per Lamp: N/A
Luminaire Lumens: 2704.9 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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°	10782	10782	10782
5°	10857	10723	10812
10°	10812	10812	11084
15°	10736	11024	11659
20°	10608	11343	12554
25°	10457	11774	13693
30°	10274	12296	14523
35°	10005	12781	14047
40°	9737	13115	12430
45°	9446	12931	11069
50°	9106	11899	10130
55°	8708	10770	9312
60°	8295	9857	8562
65°	7888	9023	7914
70°	7304	8182	7173
75°	6591	7281	6419
80°	5520	6103	5263
85°	4219	4482	3970

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	3.1
10°-20°	253.0	9.4
20°-30°	414.7	15.3
30°-40°	524.6	19.4
40°-50°	512.5	18.9
50°-60°	421.1	15.6
60°-70°	297.0	11.0
70°-80°	158.3	5.9
80°-90°	38.6	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°	752.9	27.8
0°-40°	1277.5	47.2
0°-60°	2211.1	81.7
0°-90°	2704.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2704.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	897	893	886	895	893	85
15°	860	865	883	923	934	243
25°	786	809	885	992	1029	362
35°	680	727	868	969	954	426
45°	554	617	758	684	649	427
55°	414	476	512	461	443	371
65°	276	316	316	288	277	273
75°	142	159	156	142	138	150
85°	30	33	32	30	29	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.3	894.3	894.3	894.3	894.3
2.5°	899.9	897.1	887.8	896.2	893.4
5°	897.1	893.4	886.0	895.2	893.4
7.5°	891.5	889.7	884.1	898.0	897.1
10°	883.2	882.3	883.2	903.6	905.4
12.5°	874.0	874.9	883.2	911.9	918.4
15°	860.1	864.7	883.2	923.0	934.1
17.5°	845.3	852.7	883.2	937.8	954.4
20°	826.8	839.7	884.1	953.5	978.5
22.5°	808.3	824.0	884.1	974.8	1005.3
25°	786.1	809.2	885.1	992.3	1029.3
27.5°	762.1	789.8	886.0	1006.2	1043.2
30°	738.0	771.3	883.2	1011.8	1043.2
32.5°	709.3	750.0	877.7	1002.5	1011.8
35°	679.8	726.9	868.4	969.2	954.4
37.5°	652.0	701.9	856.4	908.2	873.0
40°	618.7	675.1	833.3	830.5	789.8
42.5°	587.3	646.5	803.7	751.9	718.6
45°	554.0	616.9	758.4	684.4	649.2
47.5°	518.8	584.5	701.0	620.6	595.6
50°	485.5	551.2	634.4	562.3	540.1
52.5°	449.5	516.1	570.6	510.5	491.1
55°	414.3	476.3	512.4	460.6	443.0
57.5°	379.2	437.4	458.7	413.4	399.5
60°	344.0	396.8	408.8	369.9	355.1
62.5°	309.8	358.8	362.5	328.3	315.4
65°	276.5	316.3	316.3	288.5	277.4
67.5°	241.4	275.6	273.8	247.9	241.4
70°	207.2	235.8	232.1	210.9	203.5
72.5°	174.8	196.1	193.3	176.6	168.3
75°	141.5	159.1	156.3	141.5	137.8
77.5°	110.1	122.1	119.3	109.1	106.4
80°	79.5	88.8	87.9	80.5	75.8
82.5°	53.6	58.3	57.3	52.7	49.9
85°	30.5	33.3	32.4	29.6	28.7
87.5°	12.0	13.9	14.8	13.9	12.9
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	19.90	21.50	20.26	21.82	22.13	19.63	21.23	19.99	21.55	21.86
	3H	21.47	22.92	21.85	23.24	23.60	21.14	22.59	21.52	22.92	23.28
	4H	22.02	23.38	22.42	23.73	24.11	21.68	23.04	22.08	23.39	23.76
	6H	22.39	23.64	22.80	24.01	24.40	22.04	23.29	22.45	23.66	24.05
	8H	22.48	23.69	22.91	24.07	24.47	22.13	23.33	22.55	23.72	24.12
	12H	22.54	23.69	22.97	24.07	24.50	22.18	23.33	22.61	23.71	24.14
4H	2H	20.54	21.90	20.94	22.25	22.62	20.33	21.69	20.72	22.03	22.41
	3H	22.35	23.48	22.76	23.88	24.28	22.04	23.18	22.45	23.57	23.97
	4H	23.03	24.06	23.47	24.47	24.91	22.68	23.70	23.11	24.12	24.55
	6H	23.51	24.41	23.97	24.85	25.31	23.14	24.03	23.59	24.47	24.93
	8H	23.65	24.48	24.11	24.93	25.39	23.26	24.10	23.73	24.54	25.01
	12H	23.73	24.48	24.21	24.96	25.43	23.34	24.09	23.83	24.57	25.04
8H	4H	23.30	24.13	23.76	24.58	25.04	22.99	23.82	23.45	24.26	24.73
	6H	23.89	24.58	24.38	25.07	25.55	23.55	24.24	24.04	24.73	25.20
	8H	24.08	24.71	24.59	25.21	25.70	23.73	24.35	24.24	24.85	25.34
	12H	24.22	24.77	24.73	25.27	25.83	23.85	24.40	24.36	24.90	25.46
12H	4H	23.32	24.06	23.80	24.54	25.01	23.01	23.76	23.49	24.24	24.71
	6H	23.92	24.54	24.43	25.05	25.54	23.59	24.21	24.10	24.72	25.21
	8H	24.17	24.72	24.67	25.21	25.77	23.82	24.37	24.33	24.86	25.42