

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: P1439835

Luminaire Tested: S123DR-S675D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439835  
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-S675D850-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

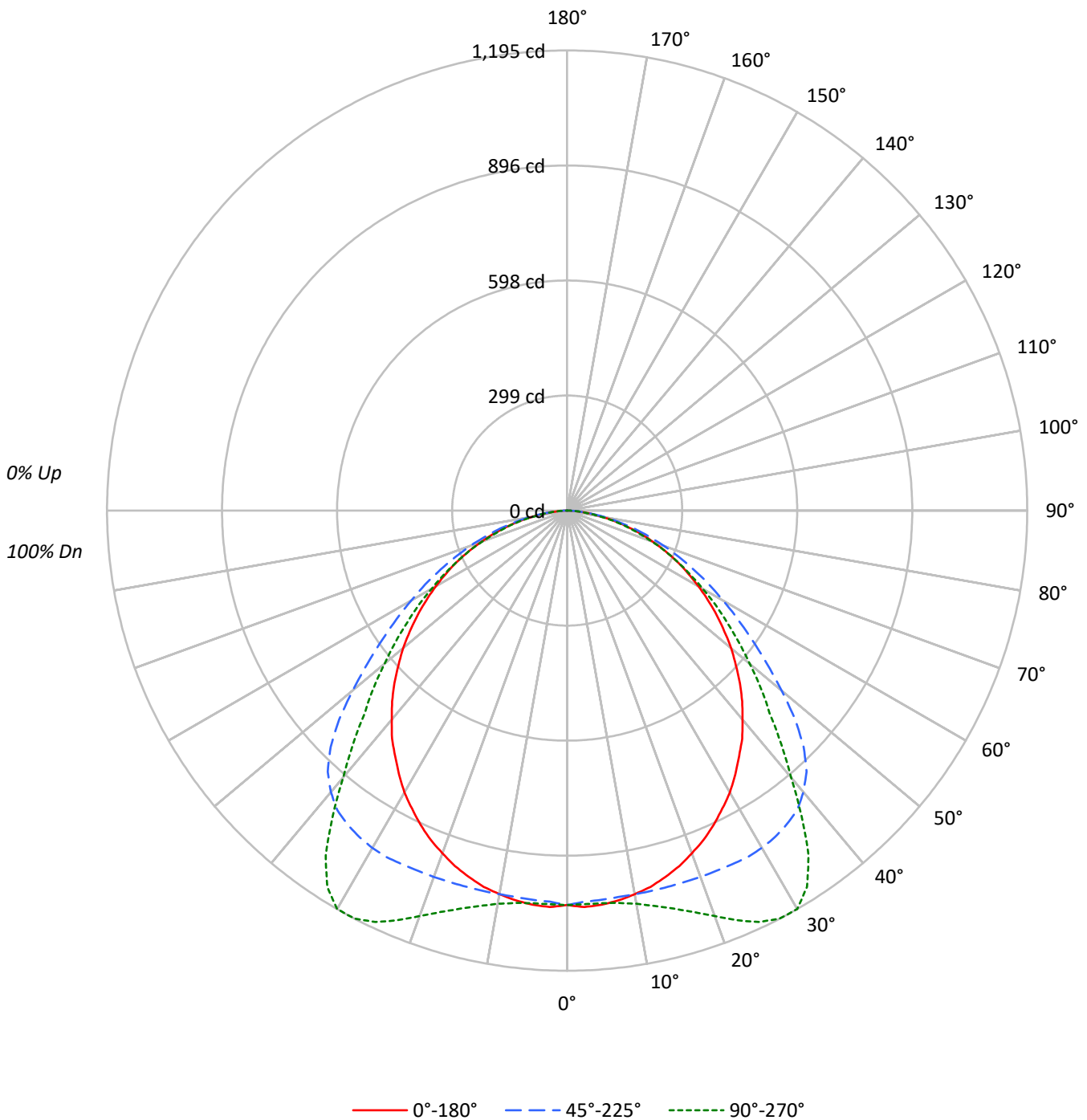
Lumens per Lamp: N/A  
Luminaire Lumens: 3097.7 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.4  
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	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					100			
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85					85			
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71					71			
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60					60			
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52					52			
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34					34			
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28					28			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12348	12348	12348
5°	12434	12280	12382
10°	12383	12383	12694
15°	12294	12625	13352
20°	12149	12991	14377
25°	11976	13484	15681
30°	11766	14082	16632
35°	11458	14637	16087
40°	11152	15019	14235
45°	10817	14808	12677
50°	10429	13628	11601
55°	9974	12334	10663
60°	9500	11287	9807
65°	9035	10333	9063
70°	8361	9370	8213
75°	7546	8338	7351
80°	6325	6985	6027
85°	4842	5132	4537

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 14808 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.5	3.1
10°-20°	289.8	9.4
20°-30°	474.9	15.3
30°-40°	600.8	19.4
40°-50°	587.0	18.9
50°-60°	482.2	15.6
60°-70°	340.1	11.0
70°-80°	181.3	5.9
80°-90°	44.2	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°	862.2	27.8
0°-40°	1463.0	47.2
0°-60°	2532.2	81.7
0°-90°	3097.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3097.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1024	1024	1024	1024	1024	
5°	1027	1023	1015	1025	1023	98
15°	985	990	1012	1057	1070	278
25°	900	927	1014	1136	1179	415
35°	778	832	994	1110	1093	487
45°	634	706	868	784	744	489
55°	474	546	587	528	507	424
65°	317	362	362	330	318	313
75°	162	182	179	162	158	172
85°	35	38	37	34	33	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1024.2	1024.2	1024.2	1024.2	1024.2
2.5°	1030.5	1027.4	1016.8	1026.3	1023.1
5°	1027.4	1023.1	1014.7	1025.2	1023.1
7.5°	1021.0	1018.9	1012.5	1028.4	1027.4
10°	1011.5	1010.4	1011.5	1034.8	1036.9
12.5°	1000.9	1001.9	1011.5	1044.3	1051.7
15°	985.0	990.3	1011.5	1057.0	1069.7
17.5°	968.1	976.5	1011.5	1074.0	1093.0
20°	946.9	961.7	1012.5	1092.0	1120.6
22.5°	925.7	943.7	1012.5	1116.3	1151.3
25°	900.3	926.7	1013.6	1136.5	1178.8
27.5°	872.7	904.5	1014.7	1152.3	1194.7
30°	845.2	883.3	1011.5	1158.7	1194.7
32.5°	812.4	859.0	1005.1	1148.1	1158.7
35°	778.5	832.5	994.5	1110.0	1093.0
37.5°	746.7	803.9	980.8	1040.1	999.8
40°	708.6	773.2	954.3	951.1	904.5
42.5°	672.6	740.3	920.4	861.1	823.0
45°	634.4	706.4	868.5	783.8	743.5
47.5°	594.2	669.4	802.8	710.7	682.1
50°	556.0	631.2	726.6	644.0	618.5
52.5°	514.7	591.0	653.5	584.6	562.4
55°	474.5	545.5	586.8	527.5	507.3
57.5°	434.2	501.0	525.3	473.4	457.5
60°	394.0	454.4	468.1	423.7	406.7
62.5°	354.8	410.9	415.2	376.0	361.2
65°	316.7	362.2	362.2	330.5	317.7
67.5°	276.4	315.6	313.5	283.8	276.4
70°	237.2	270.1	265.8	241.5	233.0
72.5°	200.2	224.5	221.4	202.3	192.8
75°	162.0	182.2	179.0	162.0	157.8
77.5°	126.0	139.8	136.6	125.0	121.8
80°	91.1	101.7	100.6	92.1	86.8
82.5°	61.4	66.7	65.7	60.4	57.2
85°	35.0	38.1	37.1	33.9	32.8
87.5°	13.8	15.9	16.9	15.9	14.8
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	20.37	21.98	20.74	22.29	22.60	20.10	21.70	20.46	22.02	22.33
	3H	21.94	23.39	22.32	23.71	24.07	21.61	23.06	21.99	23.39	23.75
	4H	22.49	23.85	22.89	24.20	24.58	22.15	23.51	22.55	23.86	24.23
	6H	22.86	24.12	23.27	24.48	24.87	22.51	23.76	22.92	24.13	24.52
	8H	22.96	24.16	23.38	24.55	24.95	22.60	23.80	23.02	24.19	24.59
	12H	23.01	24.16	23.44	24.54	24.97	22.65	23.80	23.08	24.18	24.61
4H	2H	21.01	22.37	21.41	22.72	23.09	20.80	22.16	21.19	22.50	22.88
	3H	22.82	23.95	23.23	24.35	24.75	22.51	23.65	22.92	24.04	24.44
	4H	23.51	24.53	23.94	24.94	25.38	23.15	24.17	23.58	24.59	25.02
	6H	23.99	24.88	24.44	25.32	25.78	23.61	24.50	24.06	24.94	25.40
	8H	24.12	24.95	24.58	25.40	25.86	23.73	24.57	24.20	25.01	25.48
	12H	24.20	24.95	24.69	25.43	25.90	23.82	24.56	24.30	25.04	25.51
8H	4H	23.77	24.60	24.23	25.05	25.51	23.46	24.29	23.92	24.73	25.20
	6H	24.36	25.05	24.86	25.54	26.02	24.02	24.71	24.51	25.20	25.67
	8H	24.55	25.18	25.07	25.68	26.17	24.20	24.82	24.71	25.32	25.81
	12H	24.70	25.24	25.20	25.74	26.30	24.33	24.88	24.83	25.37	25.93
12H	4H	23.79	24.53	24.27	25.01	25.48	23.48	24.23	23.96	24.71	25.18
	6H	24.39	25.02	24.90	25.52	26.01	24.06	24.68	24.57	25.19	25.68
	8H	24.64	25.19	25.14	25.68	26.24	24.29	24.84	24.80	25.33	25.89