

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: P1439811

Luminaire Tested: S123DR-S1005D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439811  
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-S1005D935-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

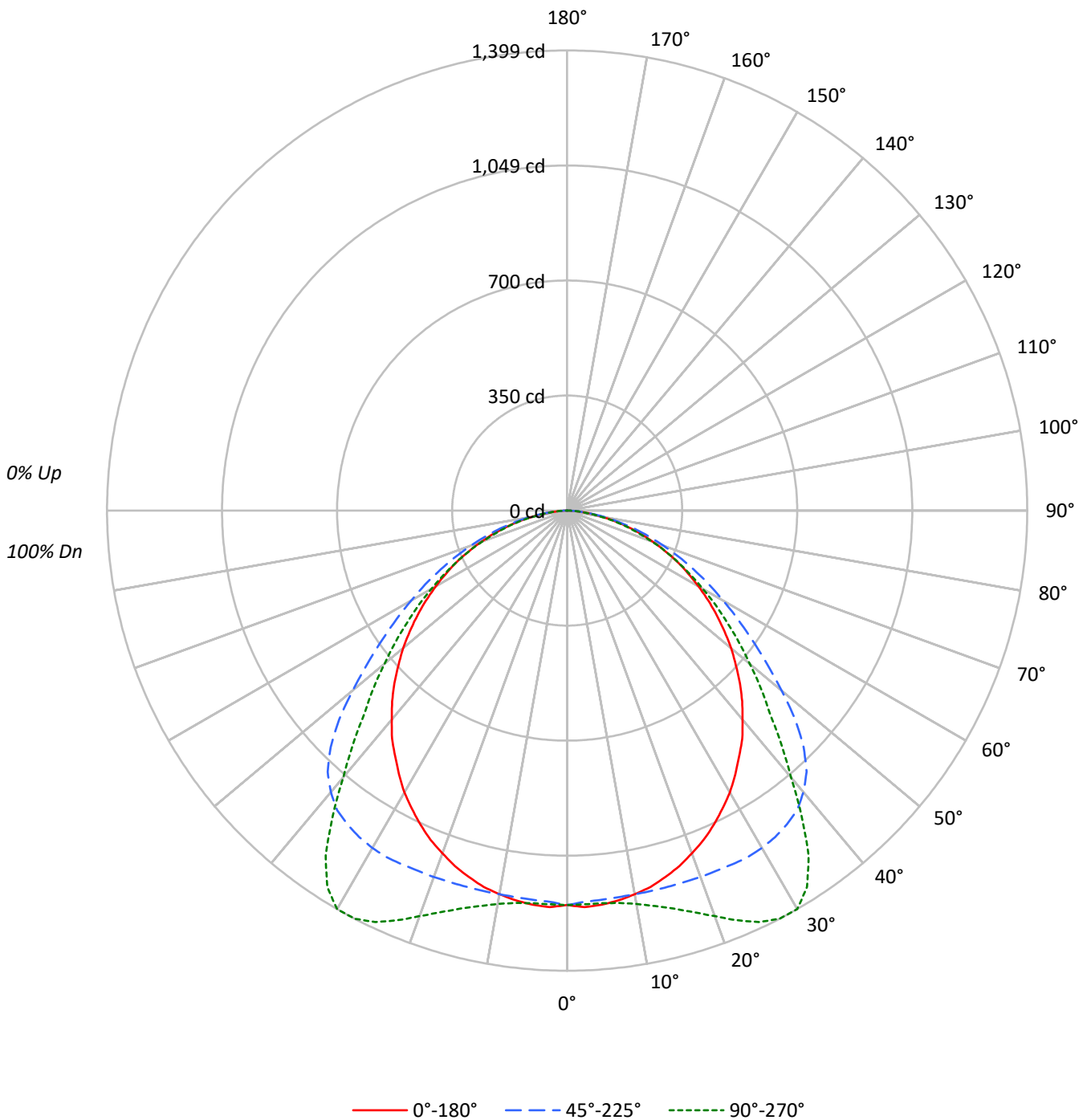
Lumens per Lamp: N/A  
Luminaire Lumens: 3627.1 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.9  
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°	14458	14458	14458
5°	14558	14378	14499
10°	14499	14499	14863
15°	14395	14782	15633
20°	14225	15211	16834
25°	14022	15788	18362
30°	13777	16487	19475
35°	13416	17139	18836
40°	13057	17586	16669
45°	12665	17338	14844
50°	12212	15956	13583
55°	11679	14441	12486
60°	11123	13216	11483
65°	10578	12099	10612
70°	9793	10974	9616
75°	8837	9764	8608
80°	7408	8179	7061
85°	5658	6004	5312

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 17338 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.2	3.1
10°-20°	339.3	9.4
20°-30°	556.1	15.3
30°-40°	703.4	19.4
40°-50°	687.3	18.9
50°-60°	564.6	15.6
60°-70°	398.2	11.0
70°-80°	212.3	5.9
80°-90°	51.7	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°	1009.6	27.8
0°-40°	1713.0	47.2
0°-60°	2964.9	81.7
0°-90°	3627.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3627.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1199	1199	1199	1199	1199	
5°	1203	1198	1188	1200	1198	114
15°	1153	1160	1184	1238	1252	325
25°	1054	1085	1187	1331	1380	485
35°	912	975	1164	1300	1280	571
45°	743	827	1017	918	871	572
55°	556	639	687	618	594	497
65°	371	424	424	387	372	366
75°	190	213	210	190	185	201
85°	41	45	43	40	38	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1199.2	1199.2	1199.2	1199.2	1199.2
2.5°	1206.7	1202.9	1190.5	1201.7	1198.0
5°	1202.9	1198.0	1188.0	1200.4	1198.0
7.5°	1195.5	1193.0	1185.6	1204.2	1202.9
10°	1184.3	1183.1	1184.3	1211.6	1214.1
12.5°	1171.9	1173.2	1184.3	1222.8	1231.5
15°	1153.3	1159.5	1184.3	1237.7	1252.5
17.5°	1133.5	1143.4	1184.3	1257.5	1279.8
20°	1108.7	1126.0	1185.6	1278.6	1312.1
22.5°	1083.9	1105.0	1185.6	1307.1	1348.0
25°	1054.1	1085.1	1186.8	1330.7	1380.3
27.5°	1021.9	1059.1	1188.0	1349.3	1398.9
30°	989.6	1034.3	1184.3	1356.7	1398.9
32.5°	951.2	1005.7	1176.9	1344.3	1356.7
35°	911.5	974.7	1164.5	1299.7	1279.8
37.5°	874.3	941.3	1148.4	1217.8	1170.7
40°	829.6	905.3	1117.4	1113.6	1059.1
42.5°	787.5	866.9	1077.7	1008.2	963.6
45°	742.8	827.2	1016.9	917.7	870.6
47.5°	695.7	783.8	940.0	832.1	798.6
50°	651.1	739.1	850.7	754.0	724.2
52.5°	602.7	692.0	765.2	684.6	658.5
55°	555.6	638.7	687.0	617.6	594.0
57.5°	508.5	586.6	615.1	554.3	535.7
60°	461.3	532.0	548.1	496.1	476.2
62.5°	415.4	481.2	486.1	440.2	422.9
65°	370.8	424.1	424.1	386.9	372.0
67.5°	323.7	369.6	367.1	332.4	323.7
70°	277.8	316.2	311.3	282.8	272.8
72.5°	234.4	262.9	259.2	236.9	225.7
75°	189.7	213.3	209.6	189.7	184.8
77.5°	147.6	163.7	160.0	146.3	142.6
80°	106.7	119.1	117.8	107.9	101.7
82.5°	71.9	78.1	76.9	70.7	67.0
85°	40.9	44.6	43.4	39.7	38.4
87.5°	16.1	18.6	19.8	18.6	17.4
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	20.92	22.52	21.28	22.84	23.15	20.65	22.25	21.01	22.56	22.88
	3H	22.49	23.94	22.87	24.26	24.62	22.16	23.61	22.54	23.93	24.29
	4H	23.04	24.40	23.44	24.75	25.12	22.70	24.06	23.09	24.40	24.78
	6H	23.41	24.66	23.82	25.03	25.42	23.05	24.31	23.47	24.68	25.07
	8H	23.50	24.71	23.93	25.09	25.49	23.15	24.35	23.57	24.74	25.14
	12H	23.56	24.71	23.99	25.09	25.52	23.20	24.35	23.63	24.73	25.16
4H	2H	21.56	22.92	21.96	23.27	23.64	21.34	22.70	21.74	23.05	23.43
	3H	23.37	24.50	23.78	24.90	25.30	23.06	24.20	23.47	24.59	24.99
	4H	24.05	25.08	24.49	25.49	25.93	23.70	24.72	24.13	25.14	25.57
	6H	24.53	25.43	24.99	25.87	26.32	24.16	25.05	24.61	25.49	25.95
	8H	24.67	25.50	25.13	25.95	26.41	24.28	25.12	24.74	25.56	26.03
	12H	24.75	25.50	25.23	25.98	26.45	24.36	25.11	24.84	25.59	26.06
8H	4H	24.32	25.15	24.78	25.60	26.06	24.00	24.84	24.47	25.28	25.75
	6H	24.91	25.60	25.40	26.09	26.57	24.57	25.26	25.06	25.75	26.22
	8H	25.10	25.72	25.61	26.23	26.72	24.74	25.37	25.26	25.87	26.36
	12H	25.24	25.79	25.75	26.28	26.85	24.87	25.42	25.38	25.91	26.48
12H	4H	24.33	25.08	24.81	25.56	26.03	24.03	24.78	24.51	25.26	25.73
	6H	24.94	25.56	25.45	26.07	26.56	24.61	25.23	25.12	25.74	26.23
	8H	25.18	25.73	25.69	26.23	26.79	24.84	25.39	25.35	25.88	26.44