

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: P1439765

Luminaire Tested: S123DR-H1005D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439765
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-H1005D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

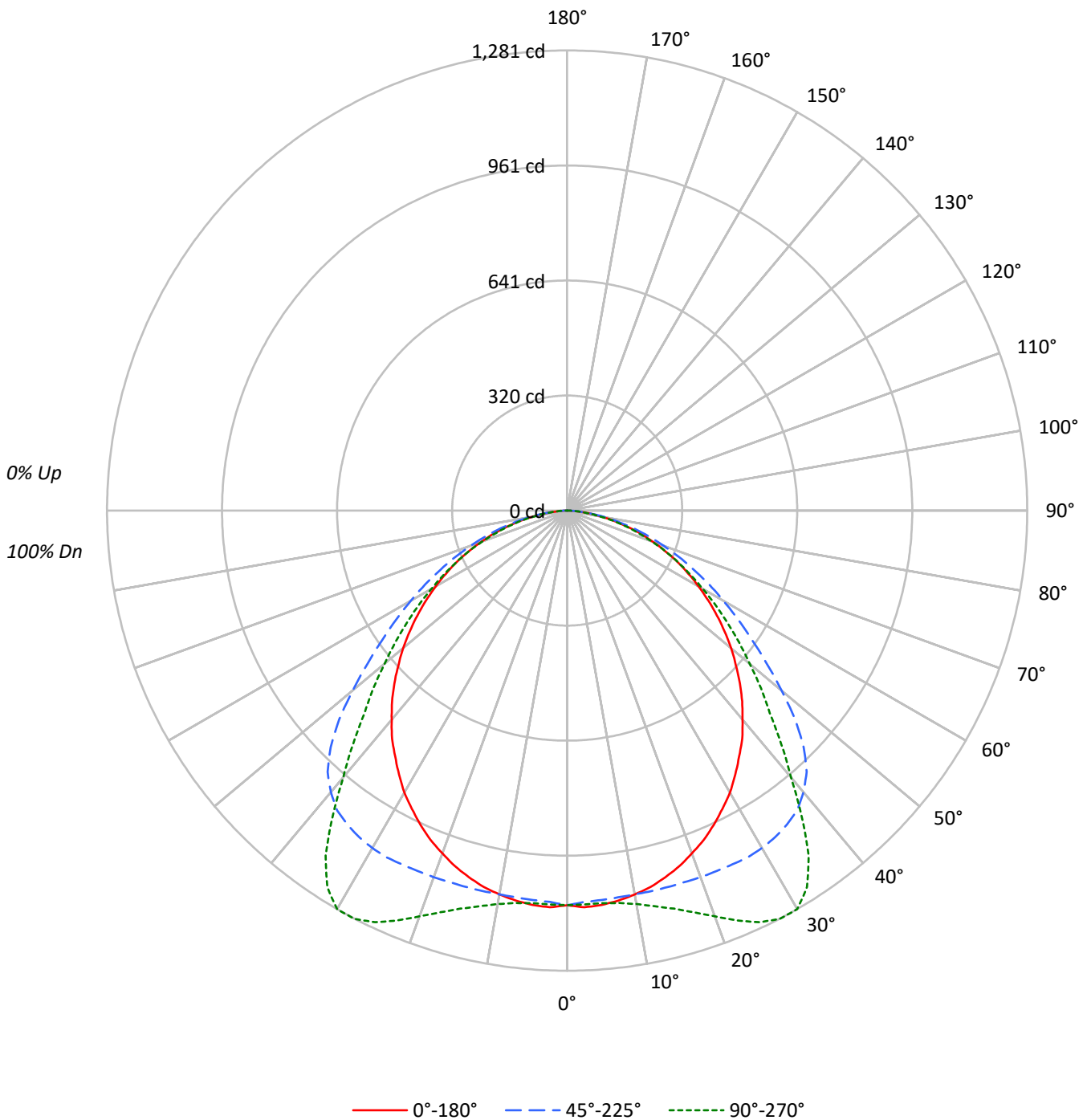
Lumens per Lamp: N/A
Luminaire Lumens: 3322.4 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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°	13244	13244	13244
5°	13336	13170	13280
10°	13281	13281	13615
15°	13186	13540	14320
20°	13029	13934	15419
25°	12845	14461	16819
30°	12620	15102	17838
35°	12288	15700	17254
40°	11960	16108	15268
45°	11601	15882	13596
50°	11186	14617	12443
55°	10697	13228	11437
60°	10190	12107	10518
65°	9688	11083	9722
70°	8971	10050	8809
75°	8096	8944	7886
80°	6783	7492	6464
85°	5187	5506	4869

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15882 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	3.1
10°-20°	310.8	9.4
20°-30°	509.4	15.3
30°-40°	644.4	19.4
40°-50°	629.5	18.9
50°-60°	517.2	15.6
60°-70°	364.8	11.0
70°-80°	194.4	5.9
80°-90°	47.4	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°	924.8	27.8
0°-40°	1569.1	47.2
0°-60°	2715.8	81.7
0°-90°	3322.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3322.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1098	1098	1098	1098	1098	
5°	1102	1097	1088	1100	1097	105
15°	1056	1062	1085	1134	1147	298
25°	966	994	1087	1219	1264	445
35°	835	893	1067	1190	1172	523
45°	680	758	932	841	797	524
55°	509	585	629	566	544	455
65°	340	388	388	354	341	335
75°	174	195	192	174	169	184
85°	38	41	40	36	35	45
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1098.5	1098.5	1098.5	1098.5	1098.5
2.5°	1105.3	1101.9	1090.5	1100.7	1097.3
5°	1101.9	1097.3	1088.2	1099.6	1097.3
7.5°	1095.1	1092.8	1086.0	1103.0	1101.9
10°	1084.8	1083.7	1084.8	1109.8	1112.1
12.5°	1073.5	1074.6	1084.8	1120.0	1128.0
15°	1056.4	1062.1	1084.8	1133.7	1147.3
17.5°	1038.3	1047.3	1084.8	1151.8	1172.3
20°	1015.5	1031.4	1086.0	1171.2	1201.8
22.5°	992.8	1012.1	1086.0	1197.3	1234.8
25°	965.6	994.0	1087.1	1218.9	1264.3
27.5°	936.0	970.1	1088.2	1235.9	1281.3
30°	906.5	947.4	1084.8	1242.7	1281.3
32.5°	871.3	921.3	1078.0	1231.4	1242.7
35°	834.9	892.9	1066.7	1190.5	1172.3
37.5°	800.8	862.2	1051.9	1115.5	1072.3
40°	759.9	829.2	1023.5	1020.1	970.1
42.5°	721.3	794.0	987.1	923.5	882.6
45°	680.4	757.7	931.5	840.6	797.4
47.5°	637.3	717.9	861.0	762.2	731.5
50°	596.4	677.0	779.3	690.7	663.4
52.5°	552.1	633.9	700.9	627.0	603.2
55°	508.9	585.0	629.3	565.7	544.1
57.5°	465.7	537.3	563.4	507.8	490.7
60°	422.6	487.3	502.1	454.4	436.2
62.5°	380.5	440.7	445.3	403.3	387.4
65°	339.6	388.5	388.5	354.4	340.8
67.5°	296.5	338.5	336.2	304.4	296.5
70°	254.5	289.7	285.1	259.0	249.9
72.5°	214.7	240.8	237.4	217.0	206.7
75°	173.8	195.4	192.0	173.8	169.3
77.5°	135.2	149.9	146.5	134.0	130.6
80°	97.7	109.1	107.9	98.8	93.1
82.5°	65.9	71.6	70.4	64.7	61.3
85°	37.5	40.9	39.8	36.4	35.2
87.5°	14.8	17.0	18.2	17.0	15.9
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	20.61	22.22	20.98	22.53	22.85	20.34	21.95	20.71	22.26	22.57
	3H	22.18	23.63	22.56	23.96	24.32	21.86	23.30	22.23	23.63	23.99
	4H	22.74	24.10	23.13	24.44	24.82	22.39	23.75	22.79	24.10	24.48
	6H	23.10	24.36	23.51	24.72	25.12	22.75	24.01	23.16	24.37	24.76
	8H	23.20	24.40	23.62	24.79	25.19	22.84	24.04	23.27	24.43	24.83
	12H	23.25	24.40	23.68	24.79	25.22	22.89	24.05	23.32	24.43	24.86
4H	2H	21.25	22.61	21.65	22.96	23.34	21.04	22.40	21.44	22.75	23.12
	3H	23.06	24.20	23.47	24.59	24.99	22.76	23.89	23.17	24.29	24.69
	4H	23.75	24.77	24.18	25.19	25.62	23.39	24.42	23.82	24.83	25.27
	6H	24.23	25.12	24.68	25.56	26.02	23.85	24.75	24.31	25.19	25.64
	8H	24.36	25.20	24.82	25.64	26.11	23.98	24.81	24.44	25.26	25.72
	12H	24.45	25.20	24.93	25.67	26.14	24.06	24.81	24.54	25.28	25.75
8H	4H	24.01	24.85	24.47	25.29	25.76	23.70	24.54	24.16	24.98	25.44
	6H	24.60	25.30	25.10	25.79	26.26	24.26	24.95	24.75	25.44	25.92
	8H	24.80	25.42	25.31	25.93	26.41	24.44	25.06	24.95	25.57	26.05
	12H	24.94	25.49	25.45	25.98	26.54	24.57	25.12	25.08	25.61	26.17
12H	4H	24.03	24.78	24.51	25.25	25.72	23.73	24.48	24.21	24.95	25.42
	6H	24.64	25.26	25.15	25.77	26.25	24.30	24.93	24.81	25.43	25.92
	8H	24.88	25.43	25.39	25.92	26.48	24.53	25.08	25.04	25.57	26.14