

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: P1439810

Luminaire Tested: S123DR-S1005D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439810
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-S1005D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

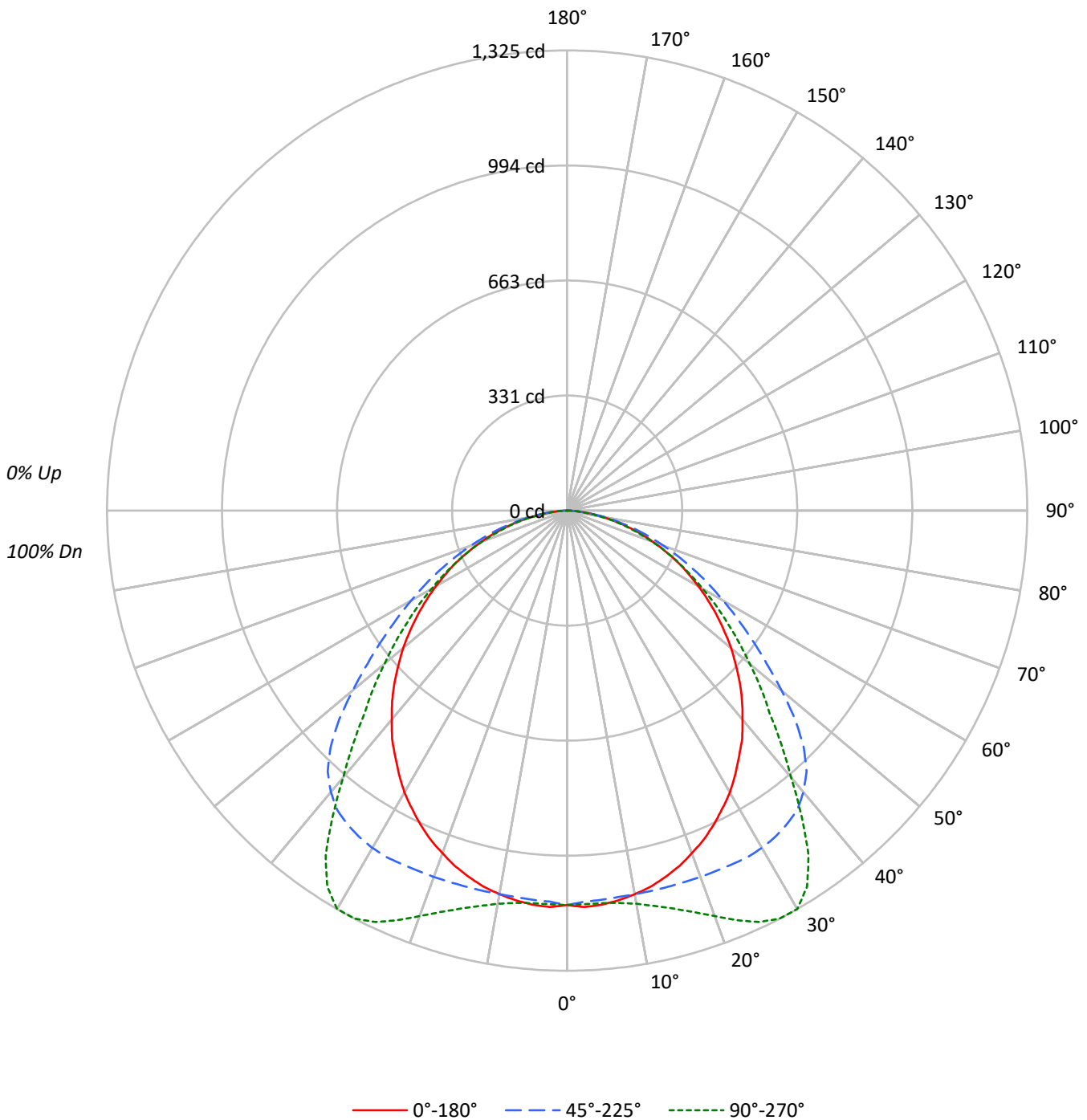
Lumens per Lamp: N/A
Luminaire Lumens: 3434.6 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	13691	13691	13691
5°	13786	13615	13729
10°	13730	13730	14074
15°	13631	13998	14805
20°	13469	14403	15940
25°	13279	14950	17387
30°	13046	15613	18440
35°	12703	16230	17837
40°	12364	16653	15784
45°	11993	16418	14056
50°	11563	15110	12863
55°	11058	13675	11824
60°	10532	12515	10872
65°	10016	11457	10050
70°	9271	10392	9105
75°	8371	9247	8152
80°	7012	7748	6686
85°	5367	5685	5035

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16418 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	3.1
10°-20°	321.3	9.4
20°-30°	526.6	15.3
30°-40°	666.1	19.4
40°-50°	650.8	18.9
50°-60°	534.6	15.6
60°-70°	377.1	11.0
70°-80°	201.0	5.9
80°-90°	49.0	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°	956.0	27.8
0°-40°	1622.1	47.2
0°-60°	2807.5	81.7
0°-90°	3434.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3434.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1136	1136	1136	1136	1136	
5°	1139	1134	1125	1137	1134	108
15°	1092	1098	1122	1172	1186	308
25°	998	1028	1124	1260	1307	460
35°	863	923	1103	1231	1212	540
45°	703	783	963	869	824	542
55°	526	605	651	585	562	471
65°	351	402	402	366	352	347
75°	180	202	198	180	175	191
85°	39	42	41	38	36	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1135.6	1135.6	1135.6	1135.6	1135.6
2.5°	1142.6	1139.1	1127.3	1137.9	1134.4
5°	1139.1	1134.4	1125.0	1136.7	1134.4
7.5°	1132.0	1129.7	1122.6	1140.3	1139.1
10°	1121.5	1120.3	1121.5	1147.3	1149.6
12.5°	1109.7	1110.9	1121.5	1157.9	1166.1
15°	1092.1	1098.0	1121.5	1172.0	1186.1
17.5°	1073.3	1082.7	1121.5	1190.8	1211.9
20°	1049.8	1066.3	1122.6	1210.7	1242.4
22.5°	1026.3	1046.3	1122.6	1237.7	1276.5
25°	998.2	1027.5	1123.8	1260.0	1307.0
27.5°	967.6	1002.9	1125.0	1277.6	1324.6
30°	937.1	979.4	1121.5	1284.7	1324.6
32.5°	900.7	952.4	1114.4	1273.0	1284.7
35°	863.1	923.0	1102.7	1230.7	1211.9
37.5°	827.9	891.3	1087.4	1153.2	1108.5
40°	785.6	857.2	1058.1	1054.5	1002.9
42.5°	745.7	820.8	1020.5	954.7	912.4
45°	703.4	783.3	962.9	869.0	824.4
47.5°	658.8	742.2	890.1	788.0	756.3
50°	616.5	699.9	805.6	714.0	685.8
52.5°	570.7	655.3	724.5	648.2	623.6
55°	526.1	604.8	650.6	584.8	562.5
57.5°	481.5	555.4	582.5	524.9	507.3
60°	436.8	503.8	519.0	469.7	450.9
62.5°	393.4	455.6	460.3	416.9	400.4
65°	351.1	401.6	401.6	366.4	352.3
67.5°	306.5	349.9	347.6	314.7	306.5
70°	263.0	299.4	294.8	267.7	258.3
72.5°	221.9	249.0	245.4	224.3	213.7
75°	179.7	202.0	198.5	179.7	175.0
77.5°	139.7	155.0	151.5	138.6	135.0
80°	101.0	112.7	111.6	102.2	96.3
82.5°	68.1	74.0	72.8	66.9	63.4
85°	38.8	42.3	41.1	37.6	36.4
87.5°	15.3	17.6	18.8	17.6	16.4
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	20.73	22.33	21.09	22.65	22.96	20.46	22.06	20.82	22.38	22.69
	3H	22.30	23.75	22.68	24.07	24.43	21.97	23.42	22.35	23.74	24.10
	4H	22.85	24.21	23.25	24.56	24.93	22.51	23.87	22.91	24.21	24.59
	6H	23.22	24.47	23.63	24.84	25.23	22.86	24.12	23.28	24.49	24.88
	8H	23.31	24.52	23.74	24.90	25.30	22.96	24.16	23.38	24.55	24.95
	12H	23.37	24.52	23.80	24.90	25.33	23.01	24.16	23.44	24.54	24.97
4H	2H	21.37	22.73	21.77	23.08	23.45	21.16	22.51	21.55	22.86	23.24
	3H	23.18	24.31	23.59	24.71	25.11	22.87	24.01	23.28	24.40	24.80
	4H	23.86	24.89	24.30	25.30	25.74	23.51	24.53	23.94	24.95	25.38
	6H	24.34	25.24	24.80	25.68	26.13	23.97	24.86	24.42	25.30	25.76
	8H	24.48	25.31	24.94	25.76	26.22	24.09	24.93	24.56	25.37	25.84
	12H	24.56	25.31	25.04	25.79	26.26	24.17	24.92	24.65	25.40	25.87
8H	4H	24.13	24.96	24.59	25.41	25.87	23.82	24.65	24.28	25.09	25.56
	6H	24.72	25.41	25.21	25.90	26.38	24.38	25.07	24.87	25.56	26.03
	8H	24.91	25.53	25.42	26.04	26.53	24.56	25.18	25.07	25.68	26.17
	12H	25.05	25.60	25.56	26.09	26.66	24.68	25.23	25.19	25.73	26.29
12H	4H	24.14	24.89	24.63	25.37	25.84	23.84	24.59	24.32	25.07	25.54
	6H	24.75	25.37	25.26	25.88	26.37	24.42	25.04	24.93	25.55	26.04
	8H	24.99	25.54	25.50	26.04	26.60	24.65	25.20	25.16	25.69	26.25