

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: P1439812

Luminaire Tested: S123DR-S1005D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439812
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-S1005D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

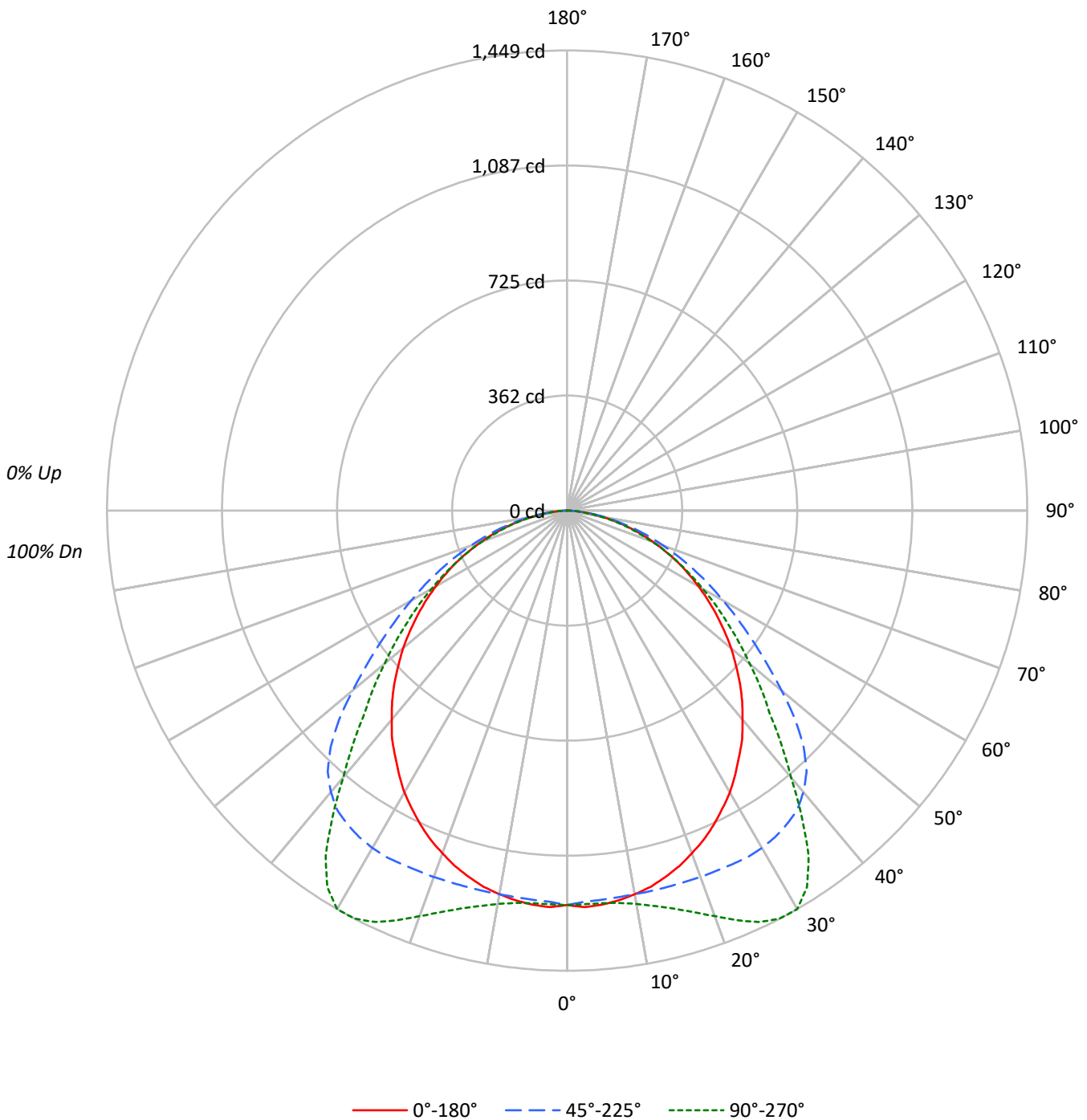
Lumens per Lamp: N/A
Luminaire Lumens: 3756.5 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P1439812

CATALOG NUMBER: S123DR-S1005D940-X4F0-XX-UDD-FLB-W

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°	14974	14974	14974
5°	15077	14891	15016
10°	15017	15017	15394
15°	14909	15310	16191
20°	14732	15754	17435
25°	14523	16350	19016
30°	14268	17076	20170
35°	13894	17750	19509
40°	13523	18213	17264
45°	13117	17957	15373
50°	12647	16526	14069
55°	12095	14956	12931
60°	11521	13689	11892
65°	10955	12532	10992
70°	10142	11365	9962
75°	9153	10113	8916
80°	7672	8470	7311
85°	5865	6225	5506

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17957 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	3.1
10°-20°	351.4	9.4
20°-30°	575.9	15.3
30°-40°	728.5	19.4
40°-50°	711.8	18.9
50°-60°	584.7	15.6
60°-70°	412.5	11.0
70°-80°	219.8	5.9
80°-90°	53.6	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°	1045.6	27.8
0°-40°	1774.1	47.2
0°-60°	3070.6	81.7
0°-90°	3756.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3756.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1246	1241	1230	1243	1241	118
15°	1194	1201	1227	1282	1297	337
25°	1092	1124	1229	1378	1430	503
35°	944	1010	1206	1346	1326	591
45°	769	857	1053	950	902	593
55°	575	662	712	640	615	515
65°	384	439	439	401	385	379
75°	196	221	217	196	191	209
85°	42	46	45	41	40	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.0	1242.0	1242.0	1242.0	1242.0
2.5°	1249.7	1245.8	1233.0	1244.6	1240.7
5°	1245.8	1240.7	1230.4	1243.3	1240.7
7.5°	1238.1	1235.6	1227.9	1247.1	1245.8
10°	1226.6	1225.3	1226.6	1254.8	1257.4
12.5°	1213.7	1215.0	1226.6	1266.4	1275.4
15°	1194.5	1200.9	1226.6	1281.8	1297.2
17.5°	1173.9	1184.2	1226.6	1302.4	1325.5
20°	1148.2	1166.2	1227.9	1324.2	1358.9
22.5°	1122.5	1144.4	1227.9	1353.7	1396.1
25°	1091.7	1123.8	1229.1	1378.1	1429.5
27.5°	1058.3	1096.9	1230.4	1397.4	1448.8
30°	1024.9	1071.2	1226.6	1405.1	1448.8
32.5°	985.1	1041.6	1218.9	1392.3	1405.1
35°	944.0	1009.5	1206.0	1346.0	1325.5
37.5°	905.5	974.8	1189.3	1261.3	1212.4
40°	859.2	937.6	1157.2	1153.4	1096.9
42.5°	815.6	897.8	1116.1	1044.2	998.0
45°	769.3	856.7	1053.2	950.4	901.6
47.5°	720.5	811.7	973.6	861.8	827.1
50°	674.3	765.5	881.1	780.9	750.1
52.5°	624.2	716.7	792.5	709.0	682.0
55°	575.4	661.5	711.5	639.6	615.2
57.5°	526.6	607.5	637.0	574.1	554.8
60°	477.8	551.0	567.7	513.7	493.2
62.5°	430.3	498.3	503.5	456.0	438.0
65°	384.0	439.3	439.3	400.7	385.3
67.5°	335.2	382.7	380.2	344.2	335.2
70°	287.7	327.5	322.4	292.8	282.6
72.5°	242.7	272.3	268.4	245.3	233.8
75°	196.5	220.9	217.1	196.5	191.4
77.5°	152.8	169.5	165.7	151.6	147.7
80°	110.5	123.3	122.0	111.7	105.3
82.5°	74.5	80.9	79.6	73.2	69.4
85°	42.4	46.2	45.0	41.1	39.8
87.5°	16.7	19.3	20.5	19.3	18.0
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	21.04	22.65	21.41	22.96	23.27	20.77	22.37	21.13	22.69	23.00
	3H	22.61	24.06	22.99	24.38	24.74	22.28	23.73	22.66	24.06	24.42
	4H	23.16	24.52	23.56	24.87	25.25	22.82	24.18	23.22	24.53	24.90
	6H	23.53	24.79	23.94	25.15	25.54	23.18	24.43	23.59	24.80	25.19
	8H	23.63	24.83	24.05	25.22	25.62	23.27	24.47	23.70	24.86	25.26
	12H	23.68	24.83	24.11	25.21	25.64	23.32	24.47	23.75	24.85	25.28
4H	2H	21.68	23.04	22.08	23.39	23.76	21.47	22.83	21.87	23.17	23.55
	3H	23.49	24.62	23.90	25.02	25.42	23.18	24.32	23.59	24.71	25.11
	4H	24.18	25.20	24.61	25.61	26.05	23.82	24.84	24.25	25.26	25.69
	6H	24.66	25.55	25.11	25.99	26.45	24.28	25.17	24.73	25.61	26.07
	8H	24.79	25.62	25.25	26.07	26.53	24.41	25.24	24.87	25.68	26.15
	12H	24.87	25.62	25.35	26.10	26.57	24.49	25.23	24.97	25.71	26.18
8H	4H	24.44	25.27	24.90	25.72	26.18	24.13	24.96	24.59	25.40	25.87
	6H	25.03	25.72	25.52	26.21	26.69	24.69	25.38	25.18	25.87	26.34
	8H	25.22	25.85	25.73	26.35	26.84	24.87	25.49	25.38	26.00	26.48
	12H	25.36	25.91	25.87	26.41	26.97	25.00	25.55	25.50	26.04	26.60
12H	4H	24.46	25.20	24.94	25.68	26.15	24.15	24.90	24.63	25.38	25.85
	6H	25.06	25.68	25.57	26.19	26.68	24.73	25.35	25.24	25.86	26.35
	8H	25.31	25.86	25.81	26.35	26.91	24.96	25.51	25.47	26.00	26.56