

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: P1439761

Luminaire Tested: S123DR-H1005D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439761
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-H1005D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

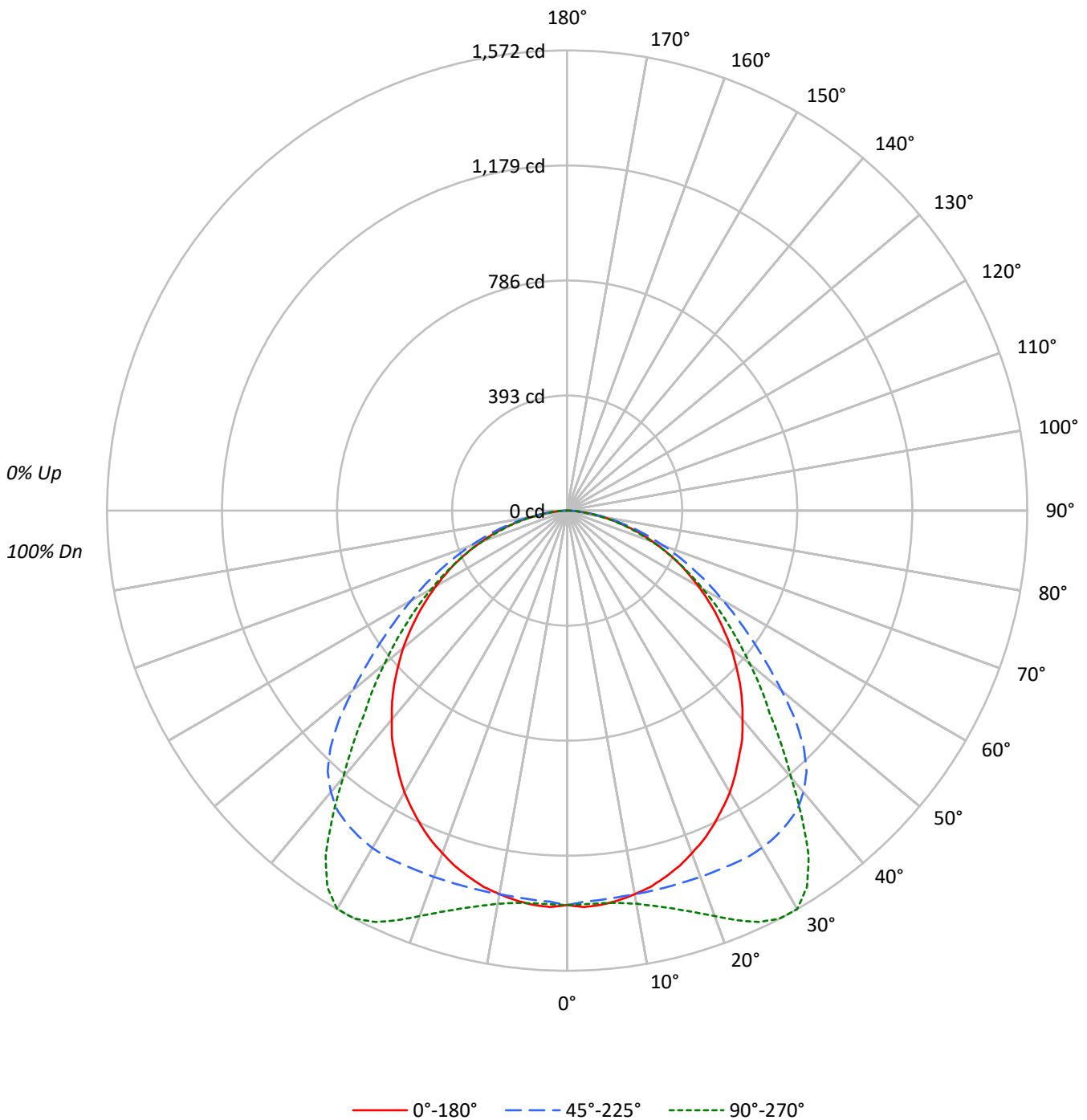
Lumens per Lamp: N/A
Luminaire Lumens: 4075.1 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	16244	16244	16244
5°	16356	16154	16289
10°	16290	16290	16699
15°	16174	16608	17564
20°	15981	17090	18913
25°	15754	17738	20629
30°	15478	18524	21879
35°	15073	19256	21163
40°	14670	19758	18727
45°	14230	19480	16677
50°	13720	17927	15262
55°	13120	16225	14029
60°	12498	14849	12900
65°	11885	13594	11925
70°	11002	12327	10804
75°	9931	10970	9671
80°	8318	9193	7929
85°	6363	6751	5976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 19480 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.3	3.1
10°-20°	381.2	9.4
20°-30°	624.8	15.3
30°-40°	790.3	19.4
40°-50°	772.1	18.9
50°-60°	634.3	15.6
60°-70°	447.4	11.0
70°-80°	238.5	5.9
80°-90°	58.1	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°	1134.3	27.8
0°-40°	1924.6	47.2
0°-60°	3331.0	81.7
0°-90°	4075.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4075.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1347	1347	1347	1347	1347	
5°	1352	1346	1335	1349	1346	128
15°	1296	1303	1331	1390	1407	365
25°	1184	1219	1333	1495	1551	545
35°	1024	1095	1308	1460	1438	641
45°	835	929	1142	1031	978	643
55°	624	718	772	694	667	558
65°	417	476	476	435	418	411
75°	213	240	236	213	208	226
85°	46	50	49	45	43	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1347.3	1347.3	1347.3	1347.3	1347.3
2.5°	1355.7	1351.5	1337.6	1350.1	1345.9
5°	1351.5	1345.9	1334.8	1348.7	1345.9
7.5°	1343.1	1340.3	1332.0	1352.9	1351.5
10°	1330.6	1329.2	1330.6	1361.2	1364.0
12.5°	1316.7	1318.1	1330.6	1373.8	1383.5
15°	1295.8	1302.7	1330.6	1390.5	1407.2
17.5°	1273.5	1284.6	1330.6	1412.8	1437.9
20°	1245.6	1265.1	1332.0	1436.5	1474.1
22.5°	1217.7	1241.4	1332.0	1468.5	1514.5
25°	1184.3	1219.1	1333.4	1495.0	1550.7
27.5°	1148.1	1189.9	1334.8	1515.9	1571.6
30°	1111.8	1162.0	1330.6	1524.3	1571.6
32.5°	1068.7	1130.0	1322.2	1510.3	1524.3
35°	1024.1	1095.1	1308.3	1460.2	1437.9
37.5°	982.3	1057.5	1290.2	1368.2	1315.3
40°	932.1	1017.1	1255.4	1251.2	1189.9
42.5°	884.7	973.9	1210.8	1132.7	1082.6
45°	834.6	929.3	1142.5	1031.0	978.1
47.5°	781.6	880.6	1056.1	934.9	897.3
50°	731.5	830.4	955.8	847.1	813.7
52.5°	677.1	777.5	859.7	769.1	739.8
55°	624.2	717.5	771.9	693.9	667.4
57.5°	571.2	659.0	691.1	622.8	601.9
60°	518.3	597.7	615.8	557.3	535.0
62.5°	466.8	540.6	546.2	494.6	475.1
65°	416.6	476.5	476.5	434.7	418.0
67.5°	363.6	415.2	412.4	373.4	363.6
70°	312.1	355.3	349.7	317.7	306.5
72.5°	263.3	295.4	291.2	266.1	253.6
75°	213.2	239.6	235.5	213.2	207.6
77.5°	165.8	183.9	179.7	164.4	160.2
80°	119.8	133.8	132.4	121.2	114.2
82.5°	80.8	87.8	86.4	79.4	75.2
85°	46.0	50.2	48.8	44.6	43.2
87.5°	18.1	20.9	22.3	20.9	19.5
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	21.32	22.93	21.69	23.24	23.56	21.05	22.66	21.42	22.97	23.28
	3H	22.89	24.34	23.27	24.67	25.03	22.57	24.01	22.94	24.34	24.70
	4H	23.44	24.80	23.84	25.15	25.53	23.10	24.46	23.50	24.81	25.19
	6H	23.81	25.07	24.22	25.43	25.82	23.46	24.72	23.87	25.08	25.47
	8H	23.91	25.11	24.33	25.50	25.90	23.55	24.75	23.98	25.14	25.54
	12H	23.96	25.11	24.39	25.50	25.92	23.60	24.75	24.03	25.14	25.57
4H	2H	21.96	23.32	22.36	23.67	24.05	21.75	23.11	22.15	23.46	23.83
	3H	23.77	24.90	24.18	25.30	25.70	23.47	24.60	23.87	25.00	25.40
	4H	24.46	25.48	24.89	25.90	26.33	24.10	25.13	24.53	25.54	25.98
	6H	24.94	25.83	25.39	26.27	26.73	24.56	25.45	25.02	25.90	26.35
	8H	25.07	25.91	25.53	26.35	26.82	24.69	25.52	25.15	25.97	26.43
	12H	25.16	25.91	25.64	26.38	26.85	24.77	25.52	25.25	25.99	26.46
8H	4H	24.72	25.56	25.18	26.00	26.47	24.41	25.24	24.87	25.69	26.15
	6H	25.31	26.01	25.81	26.49	26.97	24.97	25.66	25.46	26.15	26.63
	8H	25.51	26.13	26.02	26.64	27.12	25.15	25.77	25.66	26.28	26.76
	12H	25.65	26.20	26.16	26.69	27.25	25.28	25.83	25.79	26.32	26.88
12H	4H	24.74	25.49	25.22	25.96	26.43	24.44	25.18	24.92	25.66	26.13
	6H	25.35	25.97	25.86	26.48	26.96	25.01	25.64	25.52	26.14	26.63
	8H	25.59	26.14	26.10	26.63	27.19	25.24	25.79	25.75	26.28	26.85