

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: P1439806

Luminaire Tested: S123DR-S1005D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439806
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-S1005D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

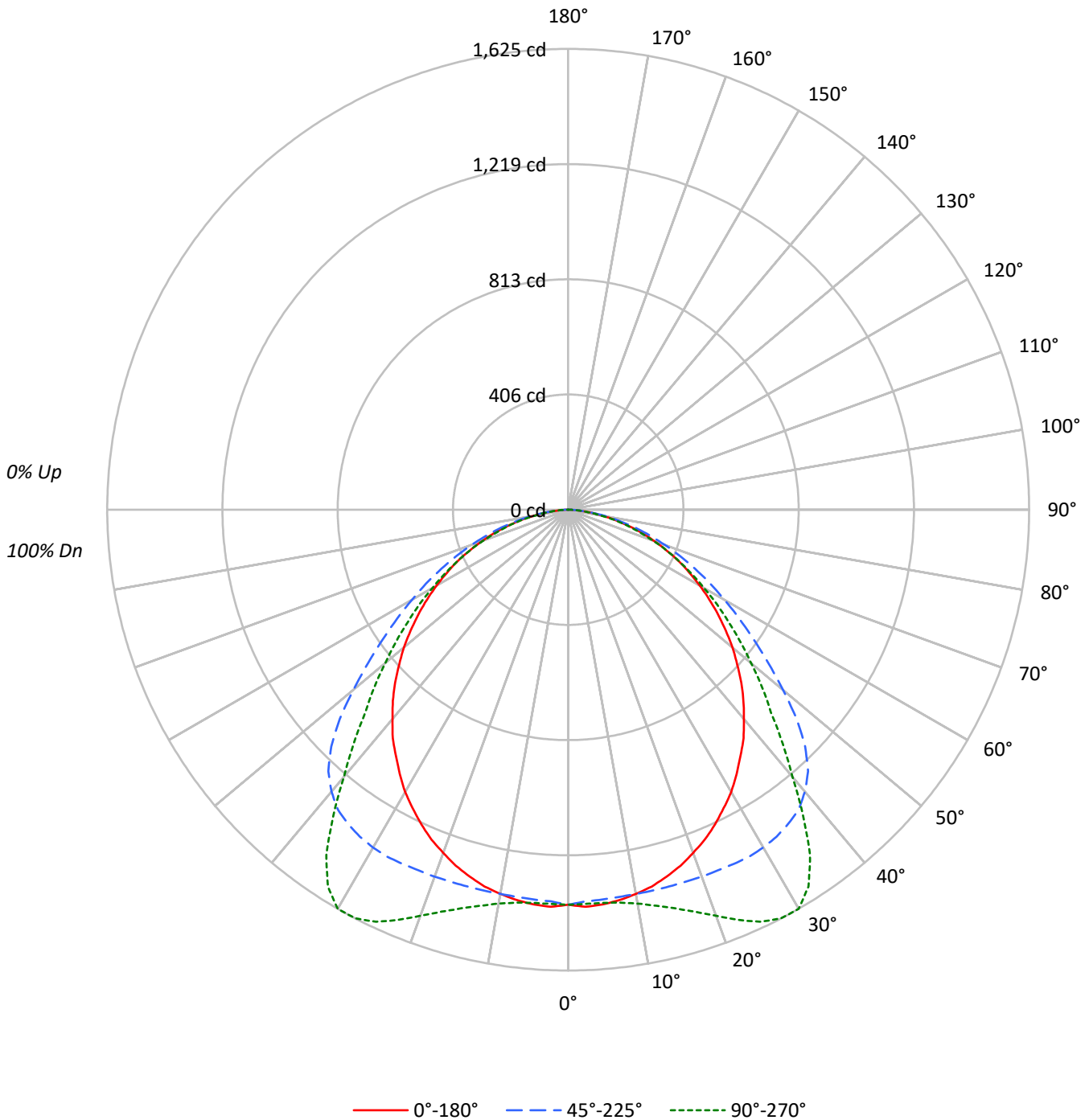
Lumens per Lamp: N/A
Luminaire Lumens: 4212.7 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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°	16792	16792	16792
5°	16908	16700	16839
10°	16839	16839	17263
15°	16719	17169	18157
20°	16521	17667	19552
25°	16287	18337	21326
30°	16001	19149	22618
35°	15582	19906	21877
40°	15166	20425	19360
45°	14711	20138	17240
50°	14184	18533	15778
55°	13564	16774	14501
60°	12920	15350	13337
65°	12287	14053	12327
70°	11372	12743	11171
75°	10267	11338	9997
80°	8602	9498	8200
85°	6571	6972	6183

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 20138 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.6	3.1
10°-20°	394.1	9.4
20°-30°	645.9	15.3
30°-40°	817.0	19.4
40°-50°	798.2	18.9
50°-60°	655.7	15.6
60°-70°	462.5	11.0
70°-80°	246.5	5.9
80°-90°	60.1	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°	1172.6	27.8
0°-40°	1989.6	47.2
0°-60°	3443.5	81.7
0°-90°	4212.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4212.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1393	1393	1393	1393	1393	
5°	1397	1391	1380	1394	1391	133
15°	1340	1347	1376	1438	1455	378
25°	1224	1260	1378	1546	1603	564
35°	1059	1132	1352	1510	1486	663
45°	863	961	1181	1066	1011	665
55°	645	742	798	717	690	577
65°	431	493	493	449	432	425
75°	220	248	243	220	215	234
85°	48	52	50	46	45	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1392.8	1392.8	1392.8	1392.8	1392.8
2.5°	1401.5	1397.1	1382.7	1395.7	1391.4
5°	1397.1	1391.4	1379.9	1394.3	1391.4
7.5°	1388.5	1385.6	1377.0	1398.6	1397.1
10°	1375.5	1374.1	1375.5	1407.2	1410.1
12.5°	1361.1	1362.6	1375.5	1420.2	1430.3
15°	1339.5	1346.7	1375.5	1437.5	1454.7
17.5°	1316.5	1328.0	1375.5	1460.5	1486.4
20°	1287.7	1307.8	1377.0	1485.0	1523.9
22.5°	1258.9	1283.3	1377.0	1518.1	1565.7
25°	1224.3	1260.3	1378.4	1545.5	1603.1
27.5°	1186.8	1230.1	1379.9	1567.1	1624.7
30°	1149.4	1201.2	1375.5	1575.7	1624.7
32.5°	1104.7	1168.1	1366.9	1561.3	1575.7
35°	1058.7	1132.1	1352.5	1509.5	1486.4
37.5°	1015.4	1093.2	1333.8	1414.4	1359.7
40°	963.6	1051.5	1297.8	1293.4	1230.1
42.5°	914.6	1006.8	1251.7	1171.0	1119.1
45°	862.8	960.7	1181.1	1065.9	1011.1
47.5°	808.0	910.3	1091.8	966.5	927.6
50°	756.2	858.4	988.1	875.7	841.2
52.5°	700.0	803.7	888.7	795.1	764.8
55°	645.3	741.8	798.0	717.3	689.9
57.5°	590.5	681.3	714.4	643.8	622.2
60°	535.8	617.9	636.6	576.1	553.1
62.5°	482.5	558.9	564.6	511.3	491.2
65°	430.7	492.6	492.6	449.4	432.1
67.5°	375.9	429.2	426.3	386.0	375.9
70°	322.6	367.3	361.5	328.4	316.9
72.5°	272.2	305.4	301.0	275.1	262.1
75°	220.4	247.7	243.4	220.4	214.6
77.5°	171.4	190.1	185.8	170.0	165.6
80°	123.9	138.3	136.8	125.3	118.1
82.5°	83.5	90.7	89.3	82.1	77.8
85°	47.5	51.9	50.4	46.1	44.7
87.5°	18.7	21.6	23.0	21.6	20.2
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	21.44	23.04	21.80	23.36	23.67	21.17	22.77	21.53	23.08	23.40
	3H	23.01	24.46	23.39	24.78	25.14	22.68	24.13	23.06	24.45	24.81
	4H	23.56	24.92	23.96	25.27	25.64	23.22	24.58	23.61	24.92	25.30
	6H	23.93	25.18	24.34	25.55	25.94	23.57	24.83	23.99	25.20	25.59
	8H	24.02	25.22	24.45	25.61	26.01	23.67	24.87	24.09	25.26	25.66
	12H	24.08	25.23	24.51	25.61	26.04	23.72	24.87	24.15	25.25	25.68
4H	2H	22.08	23.44	22.48	23.79	24.16	21.86	23.22	22.26	23.57	23.95
	3H	23.89	25.02	24.30	25.42	25.82	23.58	24.71	23.99	25.11	25.51
	4H	24.57	25.60	25.00	26.01	26.45	24.22	25.24	24.65	25.66	26.09
	6H	25.05	25.95	25.51	26.39	26.84	24.68	25.57	25.13	26.01	26.47
	8H	25.19	26.02	25.65	26.47	26.93	24.80	25.64	25.26	26.08	26.55
	12H	25.27	26.02	25.75	26.50	26.97	24.88	25.63	25.36	26.11	26.58
8H	4H	24.84	25.67	25.30	26.12	26.58	24.52	25.36	24.99	25.80	26.27
	6H	25.43	26.12	25.92	26.61	27.09	25.09	25.78	25.58	26.27	26.74
	8H	25.62	26.24	26.13	26.75	27.24	25.26	25.89	25.77	26.39	26.88
	12H	25.76	26.31	26.27	26.80	27.37	25.39	25.94	25.90	26.43	27.00
12H	4H	24.85	25.60	25.33	26.08	26.55	24.55	25.30	25.03	25.78	26.25
	6H	25.46	26.08	25.97	26.59	27.08	25.13	25.75	25.64	26.26	26.75
	8H	25.70	26.25	26.21	26.74	27.31	25.36	25.91	25.87	26.40	26.96