

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P992374

Luminaire Tested: S123DR-B1165DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992374
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-B1165DB40-4F0-XX-W2A-D
Description: Define 3 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

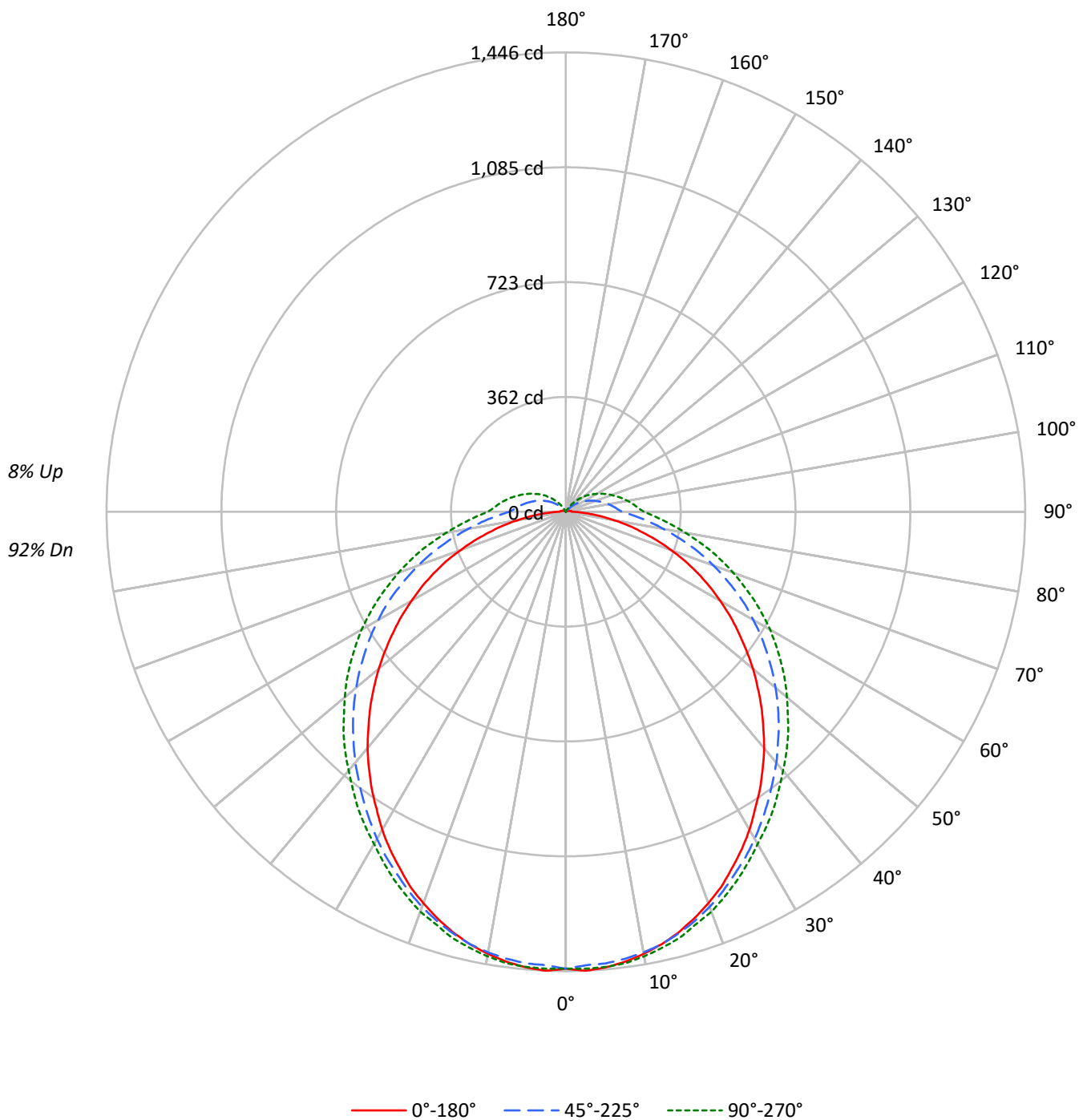
Lumens per Lamp: N/A
Luminaire Lumens: 4833.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
Input Voltage (V):
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15480	15480	15480
5°	15555	15420	15539
10°	15444	15393	15529
15°	15275	15309	15466
20°	15019	15163	15342
25°	14697	14940	15182
30°	14369	14778	15012
35°	13997	14595	14985
40°	13647	14484	14946
45°	13259	14426	15070
50°	12881	14428	15215
55°	12465	14493	15522
60°	12073	14669	15984
65°	11691	15002	16599
70°	11094	15578	17649
75°	10360	16677	19609
80°	9614	19421	23691
85°	9485	29406	37915

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 67639 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	2.8
10°-20°	388.9	8.0
20°-30°	581.6	12.0
30°-40°	694.4	14.4
40°-50°	726.5	15.0
50°-60°	681.7	14.1
60°-70°	569.4	11.8
70°-80°	407.2	8.4
80°-90°	242.3	5.0
90°-100°	152.2	3.2
100°-110°	111.9	2.3
110°-120°	74.7	1.5
120°-130°	42.6	0.9
130°-140°	19.1	0.4
140°-150°	4.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1106.9	22.9
0°-40°	1801.2	37.3
0°-60°	3209.4	66.4
0°-90°	4428.3	91.6
90°-120°	338.9	7.0
90°-150°	404.6	8.4
90°-180°	405.0	8.4
0°-180°	4833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1438	1438	1438	1438	1438	
5°	1440	1436	1427	1440	1438	137
15°	1371	1375	1374	1390	1388	386
25°	1238	1253	1258	1278	1278	570
35°	1065	1090	1111	1134	1140	666
45°	871	909	948	978	990	672
55°	664	716	772	815	827	595
65°	459	520	589	636	652	454
75°	249	323	401	453	472	266
85°	77	155	238	291	307	79
90°	20	97	177	230	246	15
95°	17	78	155	204	219	13
105°	12	50	118	161	175	13
115°	8	27	83	121	133	8
125°	5	5	50	83	94	5
135°	3	2	19	47	55	2
145°	2	0	0	12	19	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1438.1	1438.1	1438.1	1438.1	1438.1
2.5°	1445.9	1441.2	1428.7	1441.2	1439.6
5°	1439.6	1436.5	1427.1	1439.6	1438.1
7.5°	1428.7	1428.7	1419.3	1434.9	1433.4
10°	1413.0	1416.1	1408.3	1424.0	1420.8
12.5°	1394.2	1398.9	1394.2	1408.3	1405.2
15°	1370.7	1375.4	1373.8	1389.5	1387.9
17.5°	1342.5	1351.9	1350.3	1364.4	1361.3
20°	1311.2	1320.6	1323.7	1337.8	1339.4
22.5°	1278.3	1287.7	1292.4	1311.2	1309.6
25°	1237.5	1253.2	1257.9	1278.3	1278.3
27.5°	1198.4	1215.6	1225.0	1242.2	1243.8
30°	1156.1	1176.5	1189.0	1207.8	1207.8
32.5°	1109.1	1132.6	1149.8	1170.2	1174.9
35°	1065.2	1090.3	1110.7	1134.2	1140.4
37.5°	1018.2	1046.4	1069.9	1096.6	1101.3
40°	971.2	999.4	1030.8	1057.4	1063.7
42.5°	919.5	955.6	988.5	1018.2	1027.6
45°	871.0	908.6	947.7	977.5	990.0
47.5°	819.3	861.6	905.4	938.3	947.7
50°	769.2	813.0	861.6	897.6	908.6
52.5°	715.9	762.9	817.7	855.3	869.4
55°	664.2	715.9	772.3	814.6	827.1
57.5°	614.1	667.3	728.4	770.7	784.8
60°	560.8	617.2	681.4	725.3	742.5
62.5°	510.7	568.6	637.6	681.4	697.1
65°	459.0	520.1	589.0	636.0	651.7
67.5°	407.3	471.5	540.4	592.1	604.7
70°	352.5	419.8	495.0	545.1	560.8
72.5°	302.3	369.7	448.0	499.7	515.4
75°	249.1	322.7	401.0	452.7	471.5
77.5°	203.6	277.3	355.6	410.4	424.5
80°	155.1	231.8	313.3	366.6	382.2
82.5°	112.8	191.1	274.1	327.4	343.1
85°	76.8	155.1	238.1	291.4	307.0
87.5°	47.0	125.3	205.2	258.5	274.1
90°	20.4	97.1	177.0	230.3	245.9
92.5°	18.8	86.2	164.5	216.2	230.3
95°	17.2	78.3	155.1	203.6	219.3
97.5°	15.7	72.1	145.7	192.7	208.3
100°	14.1	64.2	136.3	181.7	197.4
102.5°	12.5	56.4	126.9	170.7	186.4
105°	12.5	50.1	117.5	161.4	175.4
107.5°	11.0	43.9	108.1	150.4	164.5
110°	9.4	37.6	100.3	141.0	153.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.4	31.3	90.9	130.0	144.1
115°	7.8	26.6	83.0	120.6	133.2
117.5°	7.8	20.4	73.6	111.2	123.8
120°	6.3	14.1	65.8	101.8	112.8
122.5°	6.3	9.4	58.0	92.4	103.4
125°	4.7	4.7	50.1	83.0	94.0
127.5°	4.7	3.1	42.3	73.6	84.6
130°	4.7	3.1	34.5	64.2	73.6
132.5°	3.1	3.1	26.6	54.8	65.8
135°	3.1	1.6	18.8	47.0	54.8
137.5°	3.1	1.6	12.5	37.6	45.4
140°	1.6	1.6	6.3	29.8	37.6
142.5°	1.6	0.0	0.0	20.4	28.2
145°	1.6	0.0	0.0	12.5	18.8
147.5°	0.0	0.0	0.0	4.7	11.0
150°	0.0	0.0	0.0	0.0	3.1
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)