

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: P735871

Luminaire Tested: S122DR-S485D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735871
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S485D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2015.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

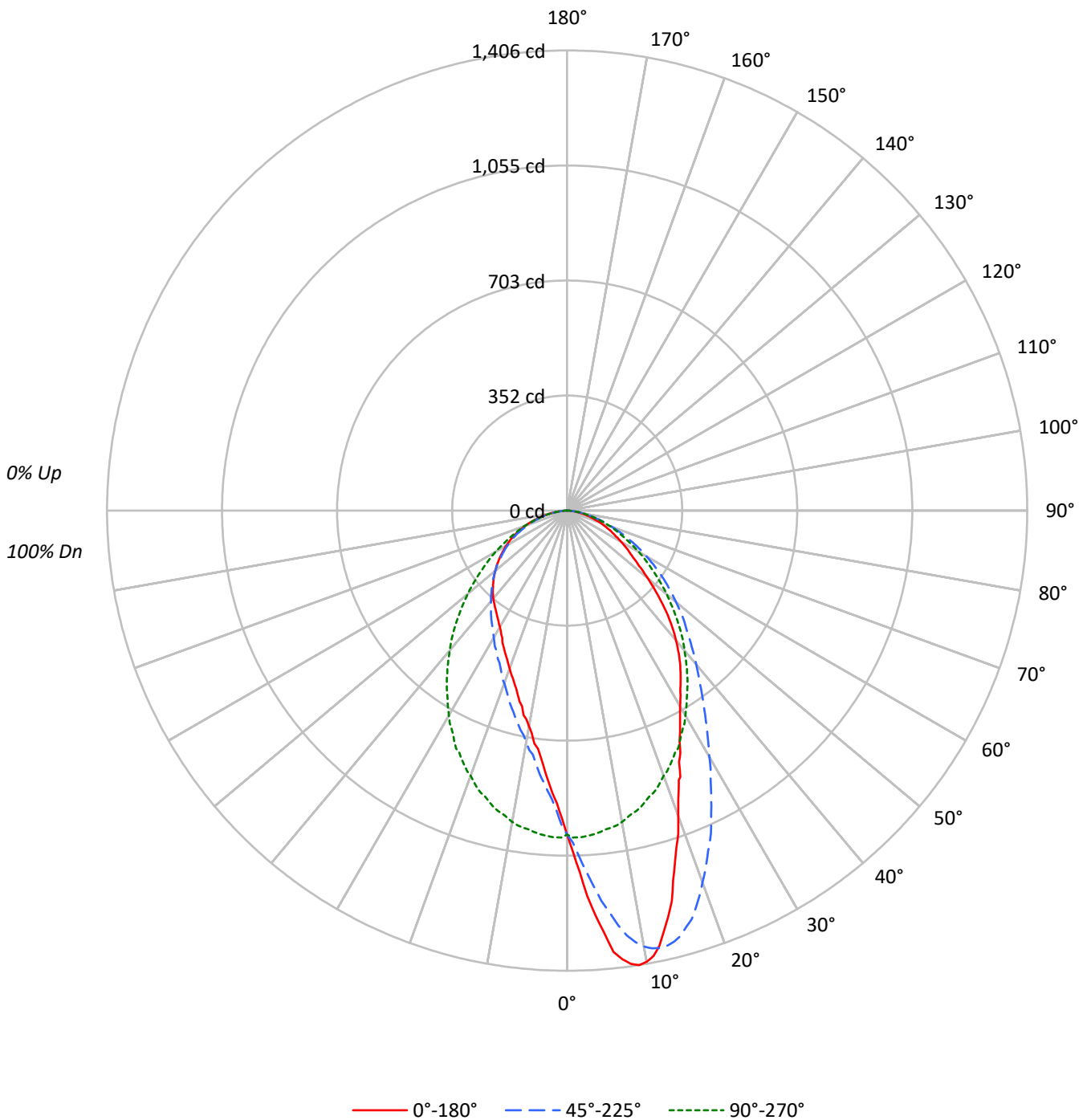
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	19035	19035	19035	19035	19035
5°	24965	23075	19135	16047	15312
10°	27327	26410	18850	14029	13071
15°	24584	26751	18339	12664	11593
20°	20285	24740	17640	11485	10512
25°	17336	22072	17020	10625	9743
30°	15332	19276	16042	9954	9124
35°	14182	17073	15046	9487	8865
40°	12980	15404	14004	9086	8812
45°	11433	14062	12950	8807	8696
50°	9626	12966	11866	8567	8588
55°	8096	11930	10720	8281	8438
60°	7300	10779	9734	8034	8269
65°	6627	9474	8669	7645	8109
70°	5968	8188	7806	7075	7688
75°	5206	6922	6669	6417	7025
80°	4372	5424	5424	5579	5878
85°	3308	3904	4058	4345	4212

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 20648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	4.8
10°-20°	267.5	13.3
20°-30°	350.8	17.4
30°-40°	370.7	18.4
40°-50°	344.2	17.1
50°-60°	275.5	13.7
60°-70°	188.4	9.4
70°-80°	97.2	4.8
80°-90°	23.1	1.1
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°	715.7	35.5
0°-40°	1086.5	53.9
0°-60°	1706.2	84.7
0°-90°	2015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2015.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	990	990	990	990	990	
5°	1294	1196	992	832	794	127
15°	1235	1344	922	636	583	339
25°	817	1041	802	501	459	377
35°	604	728	641	404	378	377
45°	421	517	476	324	320	323
55°	242	356	320	247	252	221
65°	146	208	191	168	178	144
75°	70	93	90	86	95	75
85°	15	18	18	20	19	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	990.3	990.3	990.3	990.3	990.3	990.3	990.3	990.3	990.3
1°	1044.8	1039.3	1015.5	1016.9	999.2	979.4	961.1	949.5	940.0
2°	1106.0	1095.1	1057.7	1039.3	999.2	957.0	918.9	908.7	895.7
3°	1180.2	1154.4	1102.6	1059.1	997.8	936.6	884.2	865.8	863.7
4°	1240.1	1217.0	1148.2	1079.5	994.4	916.8	857.6	837.9	828.3
5°	1293.9	1278.9	1195.9	1105.4	991.7	897.8	831.7	804.5	793.6
6°	1355.8	1325.2	1234.0	1131.2	986.9	879.4	808.6	775.9	761.0
7°	1381.0	1362.0	1276.9	1148.2	980.8	858.3	779.3	743.9	733.0
8°	1398.7	1391.2	1310.9	1176.1	978.1	838.5	753.5	731.7	718.8
9°	1406.2	1400.1	1335.4	1187.7	973.3	828.3	740.5	704.5	690.2
10°	1400.1	1402.8	1353.1	1205.4	965.8	807.2	718.8	687.4	669.7
11°	1385.8	1392.6	1362.6	1225.8	956.3	790.2	699.0	667.0	650.0
12°	1358.6	1373.5	1366.7	1240.1	947.5	775.2	685.4	654.8	639.8
13°	1316.4	1349.7	1364.0	1246.3	942.0	758.2	668.4	633.0	613.9
14°	1278.2	1313.0	1356.5	1259.9	932.5	739.2	652.7	617.3	601.0
15°	1235.4	1275.5	1344.3	1263.9	921.6	723.5	636.4	597.6	582.6
16°	1175.5	1229.2	1321.8	1268.7	908.7	705.8	621.4	584.7	564.9
17°	1125.8	1183.6	1304.8	1271.4	901.8	692.2	608.5	564.9	552.0
18°	1080.2	1145.5	1274.2	1269.4	891.0	676.6	589.4	550.6	538.4
19°	1044.1	1097.2	1243.5	1264.6	876.0	661.6	575.1	540.4	526.1
20°	991.7	1053.0	1209.5	1262.6	862.4	648.0	561.5	526.1	513.9
21°	948.1	1010.8	1178.2	1255.8	852.8	635.0	551.3	512.5	501.6
22.5°	891.0	946.1	1125.8	1242.8	831.7	613.3	528.9	499.6	484.6
23°	884.2	931.1	1112.2	1238.8	825.6	608.5	521.4	492.1	479.9
24°	841.3	891.0	1080.2	1225.8	810.0	593.5	509.1	483.3	469.0
25°	817.4	858.3	1040.7	1213.6	802.5	579.9	501.0	471.7	459.4
26°	784.1	831.1	1005.3	1195.9	786.1	567.7	488.0	461.5	449.9
27°	759.6	799.1	968.6	1183.0	767.1	554.7	477.8	451.3	437.0
28°	735.8	773.9	933.2	1161.9	753.5	540.4	470.3	442.4	428.8
29°	711.3	744.6	904.6	1145.5	740.5	528.2	458.8	430.8	417.9
30°	690.8	721.5	868.5	1123.7	722.8	513.9	448.5	422.7	411.1
32.5°	643.9	669.7	795.0	1072.0	680.6	485.3	424.0	400.2	393.4
35°	604.4	621.4	727.6	1014.2	641.2	454.7	404.3	381.2	377.8
37.5°	562.9	579.2	666.3	953.6	599.6	426.8	381.8	366.9	364.1
40°	517.3	539.1	613.9	893.7	558.1	399.5	362.1	350.5	351.2
42.5°	471.7	496.9	562.9	823.6	519.3	373.7	343.0	334.9	336.2
45°	420.6	452.6	517.3	759.6	476.4	349.2	324.0	319.9	319.9
47.5°	367.5	408.4	477.8	693.6	435.6	324.7	305.6	302.9	304.2
50°	321.9	358.7	433.6	629.6	396.8	302.2	286.5	285.9	287.2
52.5°	277.0	313.8	394.8	569.7	357.3	281.8	268.2	268.2	269.5
55°	241.6	270.2	356.0	507.1	319.9	258.0	247.1	249.1	251.8
57.5°	217.1	236.2	317.9	447.2	285.2	234.8	228.0	229.4	232.8
60°	189.9	204.9	280.4	392.0	253.2	212.4	209.0	211.7	215.1
62.5°	165.4	178.3	245.0	342.4	218.5	190.6	189.2	193.3	196.7
65°	145.7	154.5	208.3	292.0	190.6	168.8	168.1	174.2	178.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	125.2	132.0	176.3	244.3	162.7	147.0	147.0	153.8	157.2
70°	106.2	111.6	145.7	201.5	138.9	125.2	125.9	134.1	136.8
72.5°	86.4	91.2	118.4	162.0	112.3	104.8	106.9	113.7	116.4
75°	70.1	73.5	93.2	128.0	89.8	83.7	86.4	92.6	94.6
77.5°	53.8	56.5	68.7	93.9	68.7	65.3	68.1	73.5	73.5
80°	39.5	40.2	49.0	66.0	49.0	47.0	50.4	53.1	53.1
82.5°	25.9	27.2	32.0	42.2	32.7	32.0	33.4	35.4	35.4
85°	15.0	15.7	17.7	23.1	18.4	18.4	19.7	19.7	19.1
87.5°	6.1	6.8	7.5	8.8	8.2	8.8	8.8	7.5	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)