

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: P735878

Luminaire Tested: S122DR-S485D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735878
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-S485D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1906.3 lumens
Efficiency: N/A
Efficacy: 97.3 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

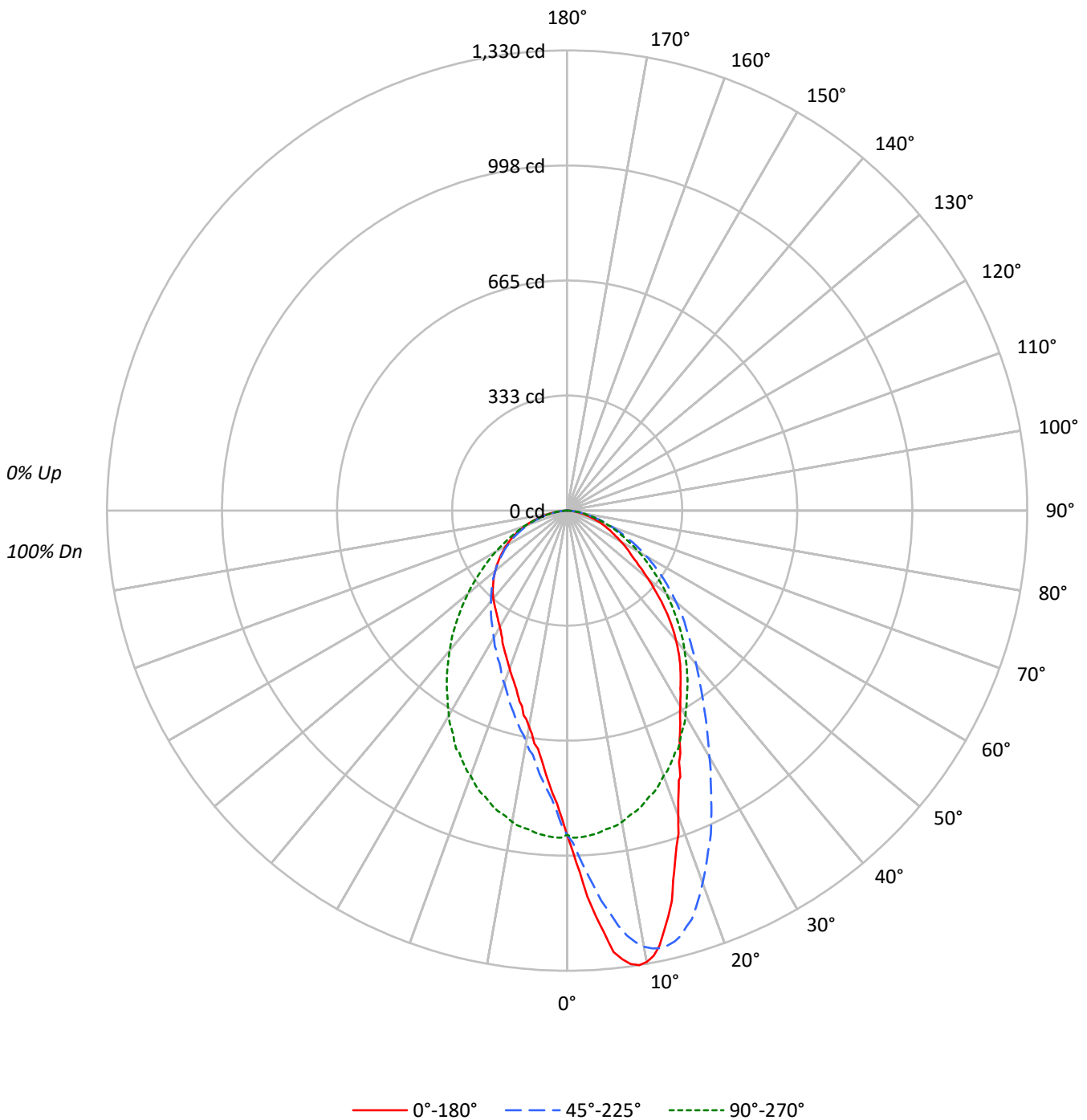
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	18008	18008	18008	18008	18008
5°	23619	21830	18102	15183	14486
10°	25853	24985	17833	13272	12366
15°	23256	25308	17350	11981	10969
20°	19191	23406	16689	10866	9945
25°	16403	20882	16101	10051	9219
30°	14507	18237	15179	9419	8632
35°	13417	16153	14234	8975	8386
40°	12280	14573	13248	8596	8338
45°	10819	13303	12254	8332	8226
50°	9108	12266	11226	8107	8125
55°	7661	11287	10141	7832	7986
60°	6908	10199	9207	7600	7823
65°	6267	8960	8200	7236	7673
70°	5648	7744	7385	6693	7272
75°	4924	6550	6313	6075	6647
80°	4129	5136	5136	5280	5557
85°	3132	3683	3837	4124	3970

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 19534 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	4.8
10°-20°	253.1	13.3
20°-30°	331.9	17.4
30°-40°	350.8	18.4
40°-50°	325.7	17.1
50°-60°	260.7	13.7
60°-70°	178.3	9.4
70°-80°	92.0	4.8
80°-90°	21.9	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°	677.1	35.5
0°-40°	1027.9	53.9
0°-60°	1614.2	84.7
0°-90°	1906.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1906.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	937	937	937	937	937	
5°	1224	1131	938	787	751	121
15°	1169	1272	872	602	551	321
25°	773	985	759	474	435	356
35°	572	688	607	382	357	357
45°	398	489	451	306	303	306
55°	229	337	303	234	238	209
65°	138	197	180	159	169	137
75°	66	88	85	82	90	71
85°	14	17	17	19	18	17
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°	936.9	936.9	936.9	936.9	936.9	936.9	936.9	936.9	936.9
1°	988.4	983.3	960.7	962.0	945.3	926.6	909.2	898.3	889.3
2°	1046.4	1036.1	1000.7	983.3	945.3	905.4	869.3	859.7	847.4
3°	1116.6	1092.1	1043.2	1002.0	944.0	886.1	836.5	819.1	817.2
4°	1173.2	1151.4	1086.3	1021.3	940.8	867.4	811.4	792.7	783.7
5°	1224.1	1209.9	1131.4	1045.7	938.2	849.3	786.9	761.1	750.8
6°	1282.7	1253.7	1167.4	1070.2	933.7	832.0	765.0	734.1	719.9
7°	1306.5	1288.5	1208.0	1086.3	927.9	812.0	737.3	703.8	693.5
8°	1323.3	1316.2	1240.2	1112.7	925.3	793.3	712.8	692.2	680.0
9°	1330.4	1324.6	1263.4	1123.7	920.8	783.7	700.6	666.5	652.9
10°	1324.6	1327.1	1280.1	1140.4	913.7	763.7	680.0	650.4	633.6
11°	1311.0	1317.5	1289.2	1159.7	904.7	747.6	661.3	631.1	615.0
12°	1285.3	1299.5	1293.0	1173.2	896.4	733.4	648.4	619.5	605.3
13°	1245.4	1276.9	1290.4	1179.0	891.2	717.3	632.3	598.9	580.8
14°	1209.3	1242.1	1283.4	1191.9	882.2	699.3	617.5	584.0	568.6
15°	1168.7	1206.7	1271.8	1195.8	871.9	684.5	602.1	565.4	551.2
16°	1112.1	1162.9	1250.5	1200.3	859.7	667.8	587.9	553.1	534.5
17°	1065.1	1119.8	1234.4	1202.9	853.2	654.9	575.7	534.5	522.2
18°	1021.9	1083.7	1205.4	1200.9	842.9	640.1	557.6	520.9	509.4
19°	987.8	1038.0	1176.5	1196.4	828.7	625.9	544.1	511.3	497.8
20°	938.2	996.2	1144.3	1194.5	815.9	613.0	531.2	497.8	486.2
21°	897.0	956.2	1114.6	1188.1	806.8	600.8	521.6	484.9	474.6
22.5°	842.9	895.1	1065.1	1175.8	786.9	580.2	500.3	472.6	458.5
23°	836.5	880.9	1052.2	1172.0	781.1	575.7	493.3	465.6	454.0
24°	795.9	842.9	1021.9	1159.7	766.3	561.5	481.7	457.2	443.7
25°	773.4	812.0	984.6	1148.1	759.2	548.6	473.9	446.2	434.7
26°	741.8	786.2	951.1	1131.4	743.7	537.0	461.7	436.6	425.6
27°	718.6	756.0	916.3	1119.2	725.7	524.8	452.0	426.9	413.4
28°	696.1	732.2	882.8	1099.2	712.8	511.3	445.0	418.6	405.7
29°	672.9	704.5	855.8	1083.7	700.6	499.7	434.0	407.6	395.4
30°	653.6	682.6	821.7	1063.1	683.9	486.2	424.4	399.9	388.9
32.5°	609.2	633.6	752.1	1014.2	643.9	459.1	401.2	378.6	372.2
35°	571.8	587.9	688.4	959.5	606.6	430.1	382.5	360.6	357.4
37.5°	532.5	548.0	630.4	902.1	567.3	403.7	361.2	347.1	344.5
40°	489.4	510.0	580.8	845.5	528.0	378.0	342.6	331.6	332.3
42.5°	446.2	470.1	532.5	779.2	491.3	353.5	324.5	316.8	318.1
45°	398.0	428.2	489.4	718.6	450.8	330.3	306.5	302.6	302.6
47.5°	347.7	386.4	452.0	656.2	412.1	307.2	289.1	286.6	287.8
50°	304.6	339.4	410.2	595.6	375.4	285.9	271.1	270.5	271.7
52.5°	262.1	296.9	373.5	539.0	338.1	266.6	253.7	253.7	255.0
55°	228.6	255.6	336.8	479.7	302.6	244.1	233.7	235.7	238.3
57.5°	205.4	223.4	300.7	423.1	269.8	222.2	215.7	217.0	220.2
60°	179.7	193.8	265.3	370.9	239.5	200.9	197.7	200.3	203.5
62.5°	156.5	168.7	231.8	323.9	206.7	180.3	179.0	182.9	186.1
65°	137.8	146.2	197.0	276.2	180.3	159.7	159.1	164.8	168.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	118.5	124.9	166.8	231.2	153.9	139.1	139.1	145.5	148.7
70°	100.5	105.6	137.8	190.6	131.4	118.5	119.1	126.9	129.4
72.5°	81.8	86.3	112.0	153.3	106.2	99.2	101.1	107.5	110.1
75°	66.3	69.5	88.2	121.1	85.0	79.2	81.8	87.6	89.5
77.5°	50.9	53.4	65.0	88.9	65.0	61.8	64.4	69.5	69.5
80°	37.3	38.0	46.4	62.5	46.4	44.4	47.7	50.2	50.2
82.5°	24.5	25.8	30.3	39.9	30.9	30.3	31.6	33.5	33.5
85°	14.2	14.8	16.7	21.9	17.4	17.4	18.7	18.7	18.0
87.5°	5.8	6.4	7.1	8.4	7.7	8.4	8.4	7.1	7.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)