

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: P735873

Luminaire Tested: S122DR-S485D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735873
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-S485D840-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2158.9 lumens
Efficiency: N/A
Efficacy: 110.1 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

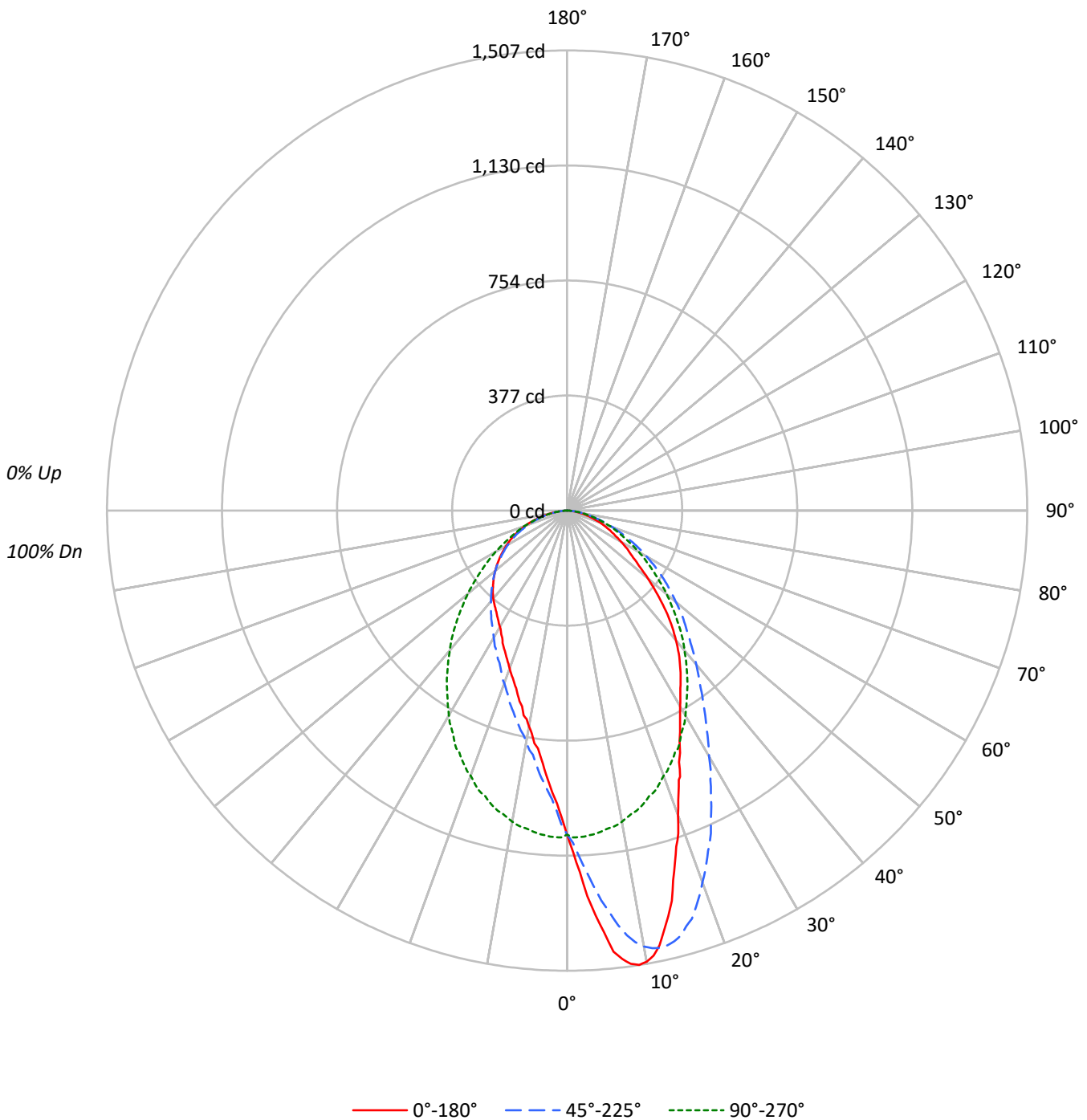
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	20396	20396	20396	20396	20396
5°	26748	24722	20501	17195	16406
10°	29279	28297	20197	15031	14006
15°	26339	28661	19649	13569	12421
20°	21733	26507	18900	12306	11262
25°	18574	23647	18235	11383	10439
30°	16429	20652	17190	10667	9777
35°	15196	18293	16120	10165	9496
40°	13906	16505	15005	9736	9442
45°	12251	15065	13877	9435	9318
50°	10314	13890	12715	9180	9201
55°	8676	12781	11488	8870	9041
60°	7823	11552	10429	8607	8857
65°	7100	10151	9287	8191	8691
70°	6395	8773	8362	7581	8239
75°	5577	7419	7152	6877	7531
80°	4682	5811	5811	5977	6298
85°	3529	4190	4345	4653	4499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 22124 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	4.8
10°-20°	286.6	13.3
20°-30°	375.8	17.4
30°-40°	397.2	18.4
40°-50°	368.8	17.1
50°-60°	295.2	13.7
60°-70°	201.9	9.4
70°-80°	104.2	4.8
80°-90°	24.7	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°	766.9	35.5
0°-40°	1164.1	53.9
0°-60°	1828.1	84.7
0°-90°	2158.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2158.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1061	1061	1061	1061	1061	
5°	1386	1281	1062	891	850	137
15°	1324	1440	987	682	624	363
25°	876	1115	860	537	492	404
35°	648	780	687	433	405	404
45°	451	554	510	347	343	346
55°	259	381	343	265	270	237
65°	156	223	204	180	191	155
75°	75	100	96	93	101	80
85°	16	19	20	21	20	19
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°	1061.1	1061.1	1061.1	1061.1	1061.1	1061.1	1061.1	1061.1	1061.1
1°	1119.4	1113.6	1088.1	1089.5	1070.5	1049.4	1029.7	1017.3	1007.1
2°	1185.0	1173.4	1133.3	1113.6	1070.5	1025.3	984.5	973.6	959.7
3°	1264.5	1236.8	1181.4	1134.7	1069.1	1003.5	947.3	927.6	925.4
4°	1328.7	1303.9	1230.3	1156.6	1065.4	982.3	918.9	897.7	887.5
5°	1386.3	1370.3	1281.3	1184.3	1062.5	961.9	891.2	862.0	850.3
6°	1452.7	1419.9	1322.1	1212.0	1057.4	942.2	866.4	831.4	815.3
7°	1479.7	1459.2	1368.1	1230.3	1050.9	919.6	835.0	797.1	785.4
8°	1498.6	1490.6	1404.5	1260.2	1047.9	898.4	807.3	784.0	770.1
9°	1506.6	1500.1	1430.8	1272.6	1042.8	887.5	793.4	754.8	739.5
10°	1500.1	1503.0	1449.8	1291.5	1034.8	864.9	770.1	736.5	717.6
11°	1484.8	1492.1	1460.0	1313.4	1024.6	846.7	748.9	714.7	696.4
12°	1455.6	1471.6	1464.3	1328.7	1015.1	830.6	734.4	701.5	685.5
13°	1410.4	1446.1	1461.4	1335.3	1009.3	812.4	716.1	678.2	657.8
14°	1369.5	1406.7	1453.4	1349.9	999.1	792.0	699.4	661.4	643.9
15°	1323.6	1366.6	1440.3	1354.2	987.4	775.2	681.9	640.3	624.2
16°	1259.4	1317.0	1416.2	1359.3	973.6	756.2	665.8	626.4	605.3
17°	1206.2	1268.2	1398.0	1362.3	966.3	741.7	652.0	605.3	591.4
18°	1157.3	1227.3	1365.2	1360.1	954.6	724.9	631.5	590.0	576.8
19°	1118.7	1175.6	1332.4	1355.0	938.6	708.8	616.2	579.0	563.7
20°	1062.5	1128.2	1295.9	1352.8	924.0	694.3	601.6	563.7	550.6
21°	1015.9	1082.9	1262.3	1345.5	913.8	680.4	590.7	549.1	537.5
22.5°	954.6	1013.7	1206.2	1331.6	891.2	657.1	566.6	535.3	519.2
23°	947.3	997.6	1191.6	1327.2	884.6	652.0	558.6	527.3	514.1
24°	901.4	954.6	1157.3	1313.4	867.8	635.9	545.5	517.8	502.5
25°	875.8	919.6	1115.0	1300.3	859.8	621.3	536.7	505.4	492.2
26°	840.1	890.4	1077.1	1281.3	842.3	608.2	522.9	494.4	482.0
27°	813.9	856.1	1037.7	1267.4	821.9	594.3	511.9	483.5	468.2
28°	788.3	829.2	999.8	1244.8	807.3	579.0	503.9	474.0	459.4
29°	762.1	797.8	969.2	1227.3	793.4	565.9	491.5	461.6	447.8
30°	740.2	773.0	930.5	1204.0	774.5	550.6	480.6	452.9	440.5
32.5°	689.9	717.6	851.8	1148.6	729.3	520.0	454.3	428.8	421.5
35°	647.6	665.8	779.6	1086.6	687.0	487.1	433.2	408.4	404.7
37.5°	603.1	620.6	713.9	1021.7	642.5	457.2	409.1	393.1	390.2
40°	554.2	577.6	657.8	957.5	598.0	428.1	388.0	375.6	376.3
42.5°	505.4	532.4	603.1	882.4	556.4	400.4	367.5	358.8	360.3
45°	450.7	485.0	554.2	813.9	510.5	374.1	347.1	342.8	342.8
47.5°	393.8	437.6	511.9	743.1	466.7	347.9	327.4	324.5	326.0
50°	344.9	384.3	464.5	674.6	425.2	323.8	307.0	306.3	307.7
52.5°	296.8	336.2	423.0	610.4	382.9	301.9	287.3	287.3	288.8
55°	258.9	289.5	381.4	543.3	342.8	276.4	264.7	266.9	269.8
57.5°	232.6	253.1	340.6	479.1	305.6	251.6	244.3	245.8	249.4
60°	203.5	219.5	300.5	420.1	271.3	227.5	223.9	226.8	230.4
62.5°	177.2	191.1	262.5	366.8	234.1	204.2	202.7	207.1	210.8
65°	156.1	165.5	223.2	312.9	204.2	180.9	180.1	186.7	191.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	134.2	141.5	188.9	261.8	174.3	157.5	157.5	164.8	168.5
70°	113.8	119.6	156.1	215.9	148.8	134.2	134.9	143.7	146.6
72.5°	92.6	97.7	126.9	173.6	120.3	112.3	114.5	121.8	124.7
75°	75.1	78.8	99.9	137.1	96.3	89.7	92.6	99.2	101.4
77.5°	57.6	60.5	73.7	100.6	73.7	70.0	72.9	78.8	78.8
80°	42.3	43.0	52.5	70.7	52.5	50.3	54.0	56.9	56.9
82.5°	27.7	29.2	34.3	45.2	35.0	34.3	35.7	37.9	37.9
85°	16.0	16.8	19.0	24.8	19.7	19.7	21.1	21.1	20.4
87.5°	6.6	7.3	8.0	9.5	8.8	9.5	9.5	8.0	8.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)