

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P199416

Luminaire Tested: **S122-DIP-U2-LO-35-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199416  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27883)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIP-U2-LO-35-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LL2-3500K, SATIN WHITE DIFFUSER  
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5386.4 lumens  
Efficiency: N/A  
Efficacy: 103.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: Semi-Indirect

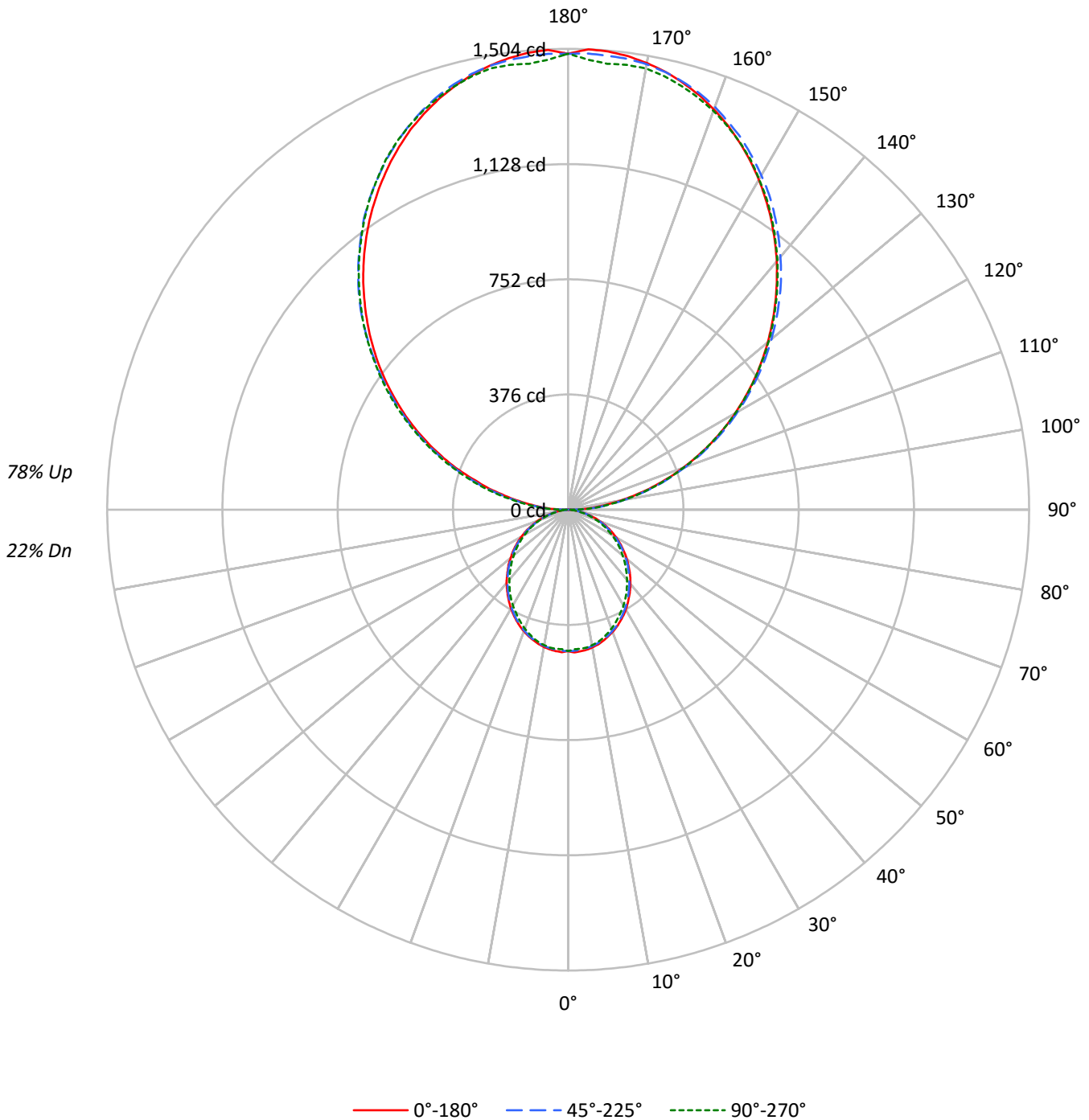
Input Watts (W): 52.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	100	100	100	100	89	89	89	89	68	68	68	48	48	48	30	30	30	22
1	92	87	84	80	81	78	75	72	59	57	55	42	41	40	27	26	26	19
2	83	76	70	66	74	68	63	59	52	49	46	37	35	33	24	23	22	16
3	76	67	60	54	67	60	54	49	46	42	38	33	30	28	21	20	18	13
4	69	59	52	46	61	53	46	41	41	36	33	29	26	24	19	17	16	11
5	64	52	45	39	56	47	40	35	36	31	28	26	23	21	17	15	14	10
6	58	47	39	34	52	42	35	30	32	28	24	24	20	18	15	13	12	9
7	54	42	35	29	48	38	31	27	29	25	21	21	18	16	14	12	11	8
8	50	38	31	26	44	34	28	23	27	22	19	19	16	14	13	11	10	7
9	46	35	27	23	41	31	25	21	24	20	17	18	15	13	12	10	9	6
10	43	32	25	20	38	28	22	18	22	18	15	16	13	11	11	9	8	6

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	7299	7299	7299
5°	7308	6046	7297
10°	7208	5163	7191
15°	7073	4441	7044
20°	6912	3821	6876
25°	6719	3297	6684
30°	6525	2866	6469
35°	6286	2480	6228
40°	6056	2133	6000
45°	5812	1825	5709
50°	5540	1548	5423
55°	5239	1296	5151
60°	4929	1063	4803
65°	4552	835	4396
70°	4084	627	3888
75°	3409	423	3186
80°	2545	246	2306
85°	1576	97	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	0.8
10°-20°	123.2	2.3
20°-30°	181.7	3.4
30°-40°	211.8	3.9
40°-50°	212.3	3.9
50°-60°	185.7	3.4
60°-70°	136.6	2.5
70°-80°	74.1	1.4
80°-90°	19.0	0.4
90°-100°	102.7	1.9
100°-110°	302.8	5.6
110°-120°	509.3	9.5
120°-130°	664.2	12.3
130°-140°	740.5	13.7
140°-150°	724.1	13.4
150°-160°	609.1	11.3
160°-170°	404.9	7.5
170°-180°	141.0	2.6
0°-30°	348.3	6.5
0°-40°	560.2	10.4
0°-60°	958.2	17.8
0°-90°	1187.8	22.1
90°-120°	914.8	17.0
90°-150°	3043.6	56.5
90°-180°	4199.0	78.0
0°-180°	5386.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	464	459	456	458	463	44
15°	443	439	435	438	441	125
25°	402	398	387	396	399	185
35°	346	342	331	339	343	217
45°	284	279	265	276	279	219
55°	215	211	198	207	211	192
65°	146	140	130	136	141	144
75°	75	71	65	67	70	80
85°	18	17	14	15	15	20
90°	1	2	2	2	0	9
95°	86	99	98	93	81	89
105°	284	296	292	282	267	300
115°	515	523	515	508	497	509
125°	741	753	743	738	724	662
135°	956	975	959	963	937	737
145°	1155	1174	1159	1161	1136	722
155°	1323	1337	1324	1323	1306	609
165°	1443	1446	1431	1438	1431	407
175°	1501	1487	1461	1485	1497	143
180°	1488	1488	1488	1488	1488	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5
2.5°	466.1	459.7	460.8	459.3	455.8	459.0	460.4	459.3	465.4
5°	464.0	457.5	458.6	456.8	455.8	456.8	458.3	456.8	463.3
7.5°	461.1	454.0	456.1	455.0	454.0	454.7	455.8	453.3	460.0
10°	456.1	449.0	452.2	450.1	449.0	449.7	451.5	447.9	455.0
12.5°	450.4	443.3	446.5	444.0	442.9	442.9	446.1	442.2	448.6
15°	442.6	436.8	439.0	436.5	434.7	435.8	438.3	435.4	440.8
17.5°	433.6	428.6	431.1	427.2	424.0	426.5	430.1	426.9	432.2
20°	424.4	418.6	421.1	415.8	412.9	415.1	419.7	417.2	422.2
22.5°	414.0	408.7	410.8	403.7	400.8	402.6	409.4	406.9	411.5
25°	401.5	397.2	397.6	390.4	387.2	389.4	396.5	395.1	399.4
27.5°	389.4	385.1	385.5	377.2	373.7	376.5	383.7	382.6	386.5
30°	376.2	372.2	371.9	363.7	360.8	362.6	369.7	369.7	373.0
32.5°	361.5	358.3	356.5	349.0	346.2	348.3	354.4	355.5	358.0
35°	346.5	344.4	341.9	334.8	330.8	333.7	339.4	340.8	343.3
37.5°	331.6	329.1	326.2	319.1	314.8	318.4	323.4	325.8	327.6
40°	315.9	314.1	310.9	303.7	298.4	301.9	307.6	310.5	313.0
42.5°	299.8	298.7	294.8	287.3	282.0	285.9	291.9	294.4	295.5
45°	283.7	282.3	278.7	270.9	265.2	269.5	275.9	278.4	278.7
47.5°	265.9	266.2	262.0	254.1	248.4	252.7	258.4	262.0	263.4
50°	249.8	250.2	245.2	237.3	231.6	234.8	241.6	245.2	244.5
52.5°	232.7	233.8	228.4	220.6	214.9	218.1	224.8	228.8	229.1
55°	214.9	216.6	210.9	203.1	198.1	201.3	207.0	211.6	211.3
57.5°	197.7	199.2	193.4	186.3	181.3	184.2	189.2	195.2	193.8
60°	180.6	182.0	176.0	168.8	164.5	166.0	171.7	176.7	176.0
62.5°	163.1	164.5	158.1	151.7	146.7	148.8	153.8	159.9	158.1
65°	145.6	146.7	139.9	134.2	129.9	132.1	135.6	142.0	140.6
67.5°	128.1	128.8	122.8	117.4	113.9	114.9	118.1	123.5	122.8
70°	110.6	111.4	105.6	100.6	97.4	98.5	101.0	106.0	105.3
72.5°	92.8	93.9	88.2	83.5	80.3	81.4	83.2	87.8	86.7
75°	74.9	75.7	71.4	67.8	65.0	65.3	66.7	70.3	70.0
77.5°	58.5	60.3	55.7	52.5	50.3	50.7	52.5	54.2	53.5
80°	42.5	44.6	41.4	38.9	37.1	36.8	38.2	39.6	38.5
82.5°	30.0	30.3	28.2	26.4	24.6	24.6	25.7	26.8	25.7
85°	17.8	18.6	16.8	15.3	14.3	13.9	14.6	15.7	15.0
87.5°	8.6	8.9	7.1	6.4	5.4	5.0	5.4	6.1	6.1
90°	0.7	1.8	1.8	2.1	2.5	2.5	2.1	2.1	0.4
92.5°	54.0	60.0	63.0	61.0	60.0	57.0	57.0	54.0	48.0
95°	86.0	95.0	99.0	98.0	98.0	94.0	93.0	90.0	81.0
97.5°	127.0	137.0	140.0	141.0	140.0	135.0	132.0	129.0	119.0
100°	174.0	184.0	187.0	187.0	186.0	181.0	177.0	173.0	162.0
102.5°	226.0	236.0	239.0	237.0	237.0	230.0	226.0	223.0	211.0
105°	284.0	294.0	296.0	293.0	292.0	285.0	282.0	278.0	267.0
107.5°	340.0	350.0	349.0	348.0	344.0	339.0	337.0	331.0	317.0
110°	398.0	411.0	406.0	404.0	400.0	395.0	393.0	391.0	380.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	456.0	470.0	464.0	462.0	457.0	451.0	451.0	450.0	439.0
115°	515.0	529.0	523.0	519.0	515.0	509.0	508.0	509.0	497.0
117.5°	572.0	588.0	581.0	576.0	572.0	565.0	566.0	568.0	555.0
120°	629.0	647.0	639.0	633.0	630.0	622.0	623.0	627.0	612.0
122.5°	685.0	703.0	696.0	690.0	687.0	678.0	680.0	682.0	668.0
125°	741.0	759.0	753.0	746.0	743.0	737.0	738.0	738.0	724.0
127.5°	796.0	814.0	810.0	802.0	798.0	790.0	794.0	791.0	779.0
130°	850.0	867.0	865.0	856.0	853.0	848.0	851.0	842.0	833.0
132.5°	903.0	920.0	921.0	911.0	907.0	902.0	908.0	898.0	886.0
135°	956.0	971.0	975.0	964.0	959.0	955.0	963.0	947.0	937.0
137.5°	1007.0	1019.0	1028.0	1015.0	1011.0	1004.0	1014.0	998.0	989.0
140°	1059.0	1069.0	1077.0	1067.0	1062.0	1056.0	1064.0	1048.0	1039.0
142.5°	1107.0	1118.0	1126.0	1116.0	1110.0	1105.0	1113.0	1096.0	1088.0
145°	1155.0	1164.0	1174.0	1165.0	1159.0	1154.0	1161.0	1144.0	1136.0
147.5°	1200.0	1208.0	1220.0	1210.0	1204.0	1200.0	1205.0	1188.0	1181.0
150°	1244.0	1248.0	1260.0	1254.0	1246.0	1242.0	1246.0	1231.0	1225.0
152.5°	1285.0	1288.0	1299.0	1292.0	1288.0	1281.0	1286.0	1271.0	1267.0
155°	1323.0	1324.0	1337.0	1329.0	1324.0	1319.0	1323.0	1311.0	1306.0
157.5°	1359.0	1359.0	1368.0	1364.0	1356.0	1354.0	1357.0	1344.0	1343.0
160°	1390.0	1388.0	1399.0	1392.0	1385.0	1383.0	1388.0	1376.0	1375.0
162.5°	1419.0	1415.0	1425.0	1416.0	1410.0	1408.0	1415.0	1404.0	1405.0
165°	1443.0	1438.0	1446.0	1437.0	1431.0	1430.0	1438.0	1427.0	1431.0
167.5°	1464.0	1456.0	1463.0	1454.0	1449.0	1448.0	1457.0	1447.0	1453.0
170°	1480.0	1470.0	1476.0	1464.0	1462.0	1460.0	1471.0	1462.0	1472.0
172.5°	1493.0	1482.0	1484.0	1471.0	1464.0	1468.0	1480.0	1475.0	1486.0
175°	1501.0	1489.0	1487.0	1473.0	1461.0	1470.0	1485.0	1484.0	1497.0
177.5°	1504.0	1493.0	1490.0	1474.0	1470.0	1472.0	1489.0	1490.0	1502.0
180°	1488.0	1488.0	1488.0	1488.0	1488.0	1488.0	1488.0	1488.0	1488.0

(END OF REPORT)