

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: P199441

Luminaire Tested: **S123-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199441
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27889 P27889)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL1-3000K, NO LENS
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7189.9 lumens
Efficiency: N/A
Efficacy: 107.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

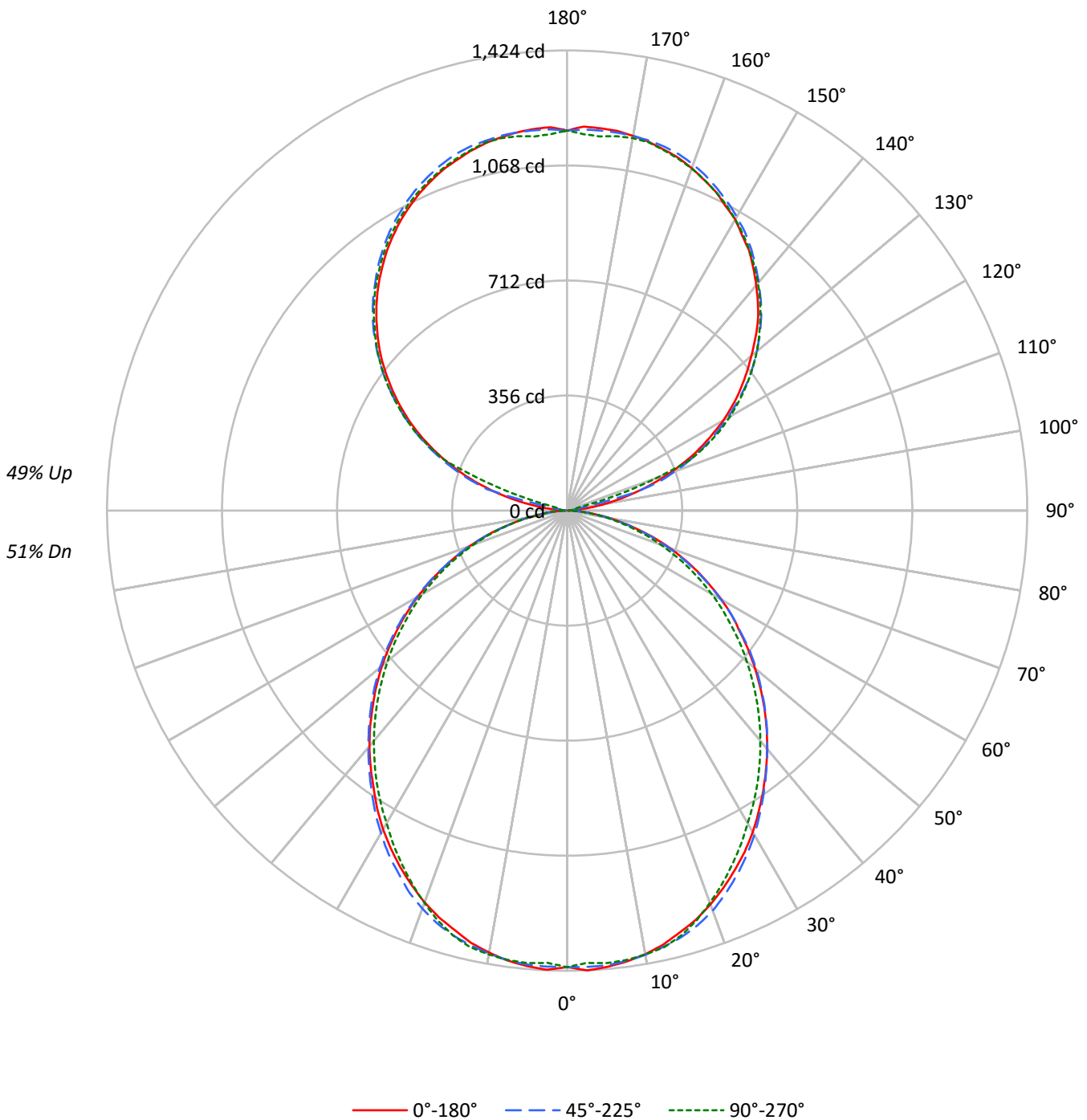
Input Watts (W): 67
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	91	87	84	80	74	71	69	62	60	59	51	50	49	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	45	43	41	36
3	82	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	17	14
10	47	35	28	23	44	33	26	22	29	23	19	25	20	17	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14894	14894	14894
5°	14883	13152	14862
10°	14687	11811	14635
15°	14391	10601	14318
20°	14081	9377	14007
25°	13691	8274	13604
30°	13283	7291	13170
35°	12792	6450	12637
40°	12302	5669	12164
45°	11781	4947	11608
50°	11218	4269	11058
55°	10595	3624	10419
60°	10023	3028	9719
65°	9255	2430	8888
70°	8301	1853	7868
75°	6960	1277	6453
80°	5206	764	4655
85°	2951	327	2603



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	1.9
10°-20°	382.3	5.3
20°-30°	565.0	7.9
30°-40°	657.6	9.1
40°-50°	659.9	9.2
50°-60°	577.6	8.0
60°-70°	426.6	5.9
70°-80°	233.0	3.2
80°-90°	60.2	0.8
90°-100°	27.6	0.4
100°-110°	193.6	2.7
110°-120°	463.3	6.4
120°-130°	599.7	8.3
130°-140°	650.9	9.1
140°-150°	616.2	8.6
150°-160°	503.3	7.0
160°-170°	327.0	4.5
170°-180°	112.2	1.6
0°-30°	1081.2	15.0
0°-40°	1738.9	24.2
0°-60°	2976.4	41.4
0°-90°	3696.3	51.4
90°-120°	684.5	9.5
90°-150°	2551.2	35.5
90°-180°	3494.0	48.6
0°-180°	7189.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1412	1412	1412	1412	1412	
5°	1417	1412	1406	1410	1415	135
15°	1351	1366	1362	1362	1344	381
25°	1227	1244	1209	1237	1219	565
35°	1058	1062	1027	1056	1045	662
45°	863	866	829	859	850	665
55°	652	655	620	649	641	585
65°	444	439	411	428	426	439
75°	229	224	207	212	213	244
85°	50	54	49	48	44	58
90°	3	6	4	5	2	5
95°	35	15	17	16	42	46
105°	223	218	33	256	241	236
115°	451	468	474	480	466	444
125°	655	675	678	677	664	585
135°	835	850	846	851	835	642
145°	982	991	984	992	976	613
155°	1089	1099	1089	1100	1082	501
165°	1157	1166	1155	1166	1152	327
175°	1187	1181	1162	1181	1185	113
180°	1176	1176	1176	1176	1176	



TEST NUMBER: P199441

CATALOG NUMBER: S123-DIP-U1-2-30-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5	1412.5
2.5°	1424.3	1409.6	1413.5	1411.5	1400.7	1411.5	1412.5	1408.6	1422.3
5°	1417.4	1404.7	1412.5	1409.6	1405.6	1409.6	1410.5	1402.7	1415.4
7.5°	1407.6	1396.8	1405.6	1404.7	1402.7	1404.7	1403.7	1392.9	1404.7
10°	1393.9	1384.1	1395.8	1397.8	1394.9	1396.8	1391.9	1381.1	1389.0
12.5°	1375.3	1367.4	1382.1	1386.0	1384.1	1385.1	1378.2	1362.5	1370.4
15°	1350.8	1346.8	1366.4	1369.4	1361.5	1366.4	1361.5	1341.9	1343.9
17.5°	1327.2	1323.3	1344.9	1340.9	1330.2	1338.0	1339.0	1317.4	1319.4
20°	1296.8	1294.9	1317.4	1305.7	1291.9	1301.7	1310.6	1289.0	1290.0
22.5°	1263.5	1265.5	1282.1	1265.5	1251.7	1261.6	1278.2	1257.6	1255.7
25°	1227.2	1233.1	1243.9	1224.3	1208.6	1219.4	1237.0	1225.3	1219.4
27.5°	1190.0	1198.8	1202.7	1180.2	1164.5	1175.3	1197.8	1190.0	1180.2
30°	1148.8	1159.6	1158.6	1135.1	1117.5	1129.2	1152.7	1151.8	1139.0
32.5°	1103.7	1118.4	1110.6	1088.1	1073.3	1082.2	1105.7	1108.6	1093.9
35°	1057.7	1073.3	1061.6	1040.0	1027.3	1036.1	1055.7	1064.5	1044.9
37.5°	1010.6	1026.3	1012.6	992.0	979.2	988.1	1006.7	1017.5	998.9
40°	962.6	977.3	963.6	945.9	930.2	940.0	956.7	968.5	951.8
42.5°	913.6	929.3	914.6	896.9	880.2	893.0	907.7	919.5	901.8
45°	862.6	879.3	865.5	845.0	829.3	842.0	858.7	868.5	849.9
47.5°	810.6	830.3	814.6	793.0	777.3	790.1	807.7	817.5	799.9
50°	758.7	775.4	763.6	741.1	725.4	737.1	756.7	764.6	747.9
52.5°	705.8	725.4	711.6	689.1	674.4	684.2	702.8	711.6	694.0
55°	651.9	667.5	654.8	636.2	619.5	631.3	648.9	654.8	641.1
57.5°	604.8	616.6	604.8	584.2	568.5	577.4	594.0	601.9	588.1
60°	550.9	561.7	549.9	530.3	516.6	524.4	538.1	547.9	534.2
62.5°	497.0	507.8	494.0	476.4	463.6	472.5	484.2	493.1	480.3
65°	444.0	453.8	439.1	423.5	410.7	419.5	428.4	438.2	426.4
67.5°	390.1	399.0	385.2	369.5	358.8	365.6	373.5	383.3	373.5
70°	337.2	344.1	332.3	317.6	307.8	313.7	320.5	328.4	319.6
72.5°	284.3	293.1	278.4	266.6	257.8	259.8	267.6	273.5	266.6
75°	229.4	235.3	224.5	214.7	206.8	208.8	211.7	220.6	212.7
77.5°	178.4	185.3	176.4	167.6	161.7	163.7	164.7	170.6	162.7
80°	130.4	136.3	130.4	123.5	119.6	120.6	120.6	124.5	116.6
82.5°	87.2	93.1	89.2	84.3	83.3	81.4	81.4	84.3	76.5
85°	50.0	56.9	53.9	50.0	49.0	48.0	48.0	50.0	44.1
87.5°	22.5	27.4	24.5	21.6	19.6	18.6	18.6	21.6	16.7
90°	2.9	6.9	5.9	3.9	3.9	3.9	4.9	5.9	2.0
92.5°	7.5	8.9	8.9	8.9	8.9	10.2	10.9	10.9	12.9
95°	34.7	12.9	15.0	16.3	17.0	17.0	16.3	14.3	42.2
97.5°	72.2	57.2	18.4	20.4	21.8	21.1	19.7	72.8	81.7
100°	117.1	132.8	20.4	23.1	24.5	23.8	22.5	149.1	129.4
102.5°	166.8	185.2	73.5	25.9	26.6	25.9	112.3	200.8	184.5
105°	222.6	238.3	218.5	43.6	33.4	53.1	256.0	254.0	241.0
107.5°	279.1	294.8	298.2	193.4	175.0	202.9	313.2	309.1	299.6
110°	337.0	348.6	356.1	359.5	293.4	364.2	369.0	363.6	355.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	394.9	407.1	413.9	418.7	413.3	422.1	423.5	418.0	410.5
115°	450.7	461.6	468.4	475.9	473.9	477.3	480.0	472.5	465.7
117.5°	503.1	516.8	520.8	528.3	531.0	528.3	531.0	524.9	518.8
120°	558.3	569.2	571.9	578.7	582.1	578.0	581.4	576.0	569.2
122.5°	608.0	617.5	624.3	627.0	630.4	625.7	629.8	623.6	617.5
125°	655.0	665.2	675.4	674.7	678.1	672.7	677.4	669.9	664.5
127.5°	699.9	710.1	722.4	720.3	723.0	717.6	723.7	714.9	710.1
130°	743.5	755.7	766.6	763.9	766.6	761.9	767.3	759.1	754.4
132.5°	790.4	802.0	808.8	806.1	806.1	803.4	810.9	802.0	795.2
135°	835.4	842.9	849.7	845.6	845.6	842.9	851.0	842.9	834.7
137.5°	873.5	881.7	886.4	883.7	883.7	880.3	888.5	881.0	872.8
140°	910.3	917.8	921.8	918.4	918.4	915.7	923.9	917.8	908.9
142.5°	946.4	953.2	957.2	951.8	951.8	949.1	959.3	952.5	942.3
145°	981.8	986.5	991.3	983.1	983.8	979.7	992.0	985.2	975.6
147.5°	1008.3	1017.2	1022.6	1013.1	1013.1	1009.7	1022.6	1015.8	1004.9
150°	1040.3	1043.7	1049.8	1041.7	1041.0	1038.3	1050.5	1043.0	1033.5
152.5°	1062.1	1070.3	1075.7	1066.9	1066.2	1062.8	1076.4	1068.2	1058.7
155°	1088.6	1092.1	1098.9	1090.7	1088.6	1087.3	1100.2	1090.0	1082.5
157.5°	1107.7	1111.8	1121.3	1113.8	1108.4	1110.4	1120.6	1109.1	1102.9
160°	1127.5	1128.8	1139.7	1132.2	1126.1	1128.8	1139.0	1124.7	1122.7
162.5°	1144.5	1145.2	1155.4	1146.5	1141.8	1142.4	1154.7	1140.4	1137.0
165°	1156.7	1155.4	1165.6	1158.1	1154.7	1154.7	1165.6	1152.6	1152.0
167.5°	1168.3	1167.6	1172.4	1167.6	1166.9	1163.5	1171.7	1162.9	1164.9
170°	1177.2	1174.4	1177.2	1170.3	1170.3	1166.9	1177.8	1170.3	1173.1
172.5°	1185.3	1179.9	1179.9	1170.3	1168.3	1167.6	1180.6	1176.5	1180.6
175°	1187.4	1182.6	1180.6	1170.3	1162.2	1168.3	1181.2	1178.5	1185.3
177.5°	1189.4	1181.9	1179.9	1167.6	1165.6	1166.3	1180.6	1179.2	1187.4
180°	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8	1175.8

(END OF REPORT)