

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: P199460

Luminaire Tested: **S123-DIP-ULO-2-35-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199460
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-ULO-2-35-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LLO-3500K, NO LENS
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5602.5 lumens
Efficiency: N/A
Efficacy: 101.7 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: Semi-Direct

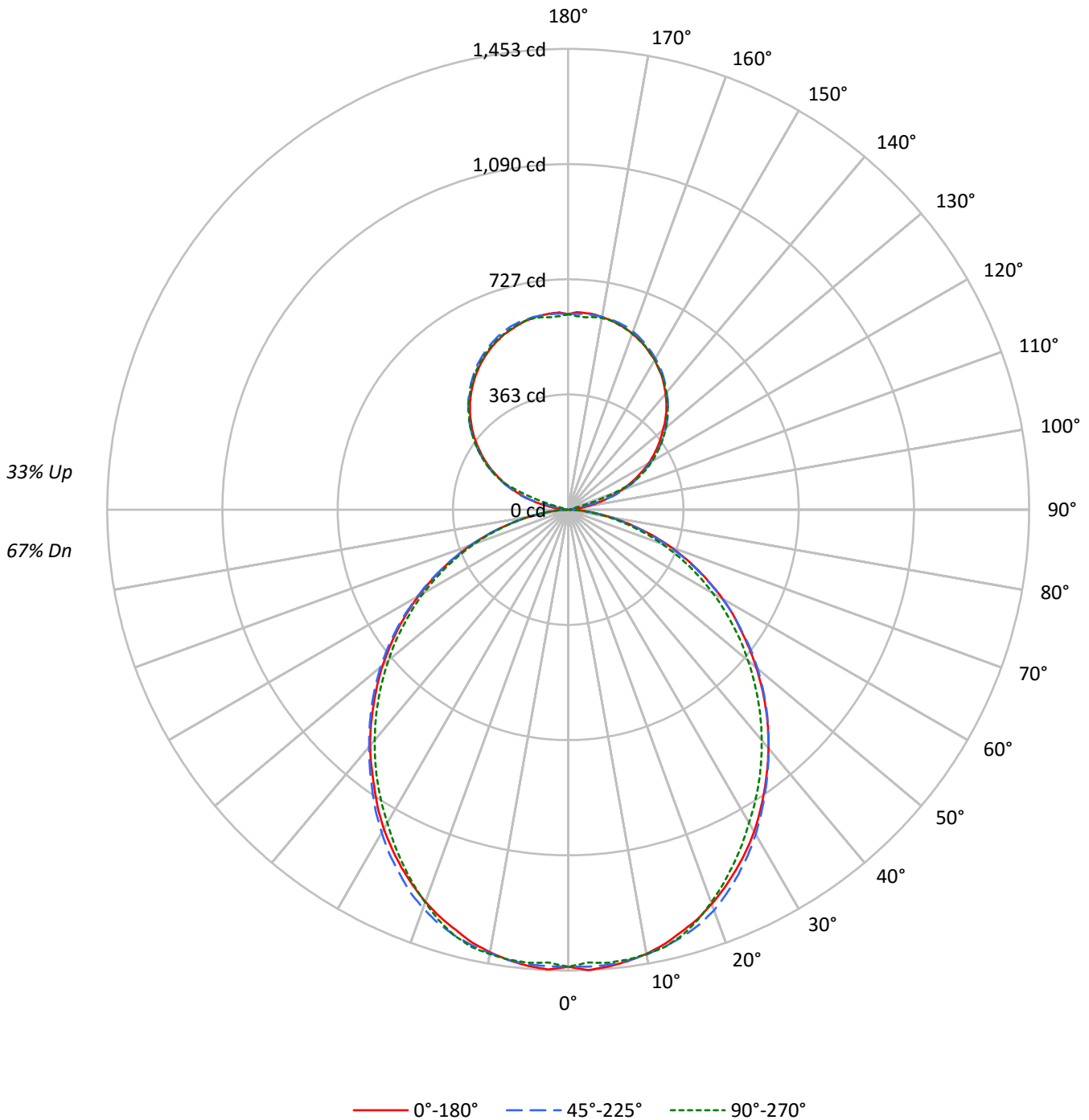
Input Watts (W): 55.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	97	93	90	96	92	88	85	82	79	77	72	70	69	64	62	61	57
2	93	85	79	73	87	80	75	70	72	67	63	64	60	57	56	54	51	48
3	85	75	67	61	79	71	64	59	63	58	53	56	52	48	50	46	44	40
4	77	66	58	52	73	63	55	50	56	50	46	50	45	42	44	41	38	35
5	71	59	51	45	67	56	49	43	50	44	39	45	40	36	40	36	33	30
6	66	53	45	39	62	50	43	37	45	39	34	41	36	32	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	32	27	34	29	25	31	26	23	21
9	53	40	32	27	50	38	31	26	35	29	24	31	26	23	28	24	21	19
10	49	37	29	24	46	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	15194	15194	15194
5°	15183	13417	15162
10°	14983	12049	14930
15°	14681	10816	14607
20°	14365	9566	14289
25°	13968	8441	13879
30°	13551	7438	13435
35°	13050	6579	12893
40°	12550	5783	12409
45°	12019	5046	11841
50°	11444	4355	11281
55°	10807	3697	10629
60°	10225	3089	9916
65°	9443	2479	9067
70°	8469	1890	8025
75°	7100	1303	6584
80°	5310	779	4751
85°	3010	333	2656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	2.4
10°-20°	390.0	7.0
20°-30°	576.4	10.3
30°-40°	670.9	12.0
40°-50°	673.3	12.0
50°-60°	589.2	10.5
60°-70°	435.2	7.8
70°-80°	237.7	4.2
80°-90°	61.5	1.1
90°-100°	14.8	0.3
100°-110°	101.5	1.8
110°-120°	242.9	4.3
120°-130°	314.4	5.6
130°-140°	341.2	6.1
140°-150°	323.0	5.8
150°-160°	263.8	4.7
160°-170°	171.4	3.1
170°-180°	58.8	1.0
0°-30°	1103.0	19.7
0°-40°	1773.9	31.7
0°-60°	3036.4	54.2
0°-90°	3770.8	67.3
90°-120°	359.1	6.4
90°-150°	1337.7	23.9
90°-180°	1832.0	32.7
0°-180°	5602.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1441	1441	1441	1441	1441	
5°	1446	1441	1434	1439	1444	137
15°	1378	1394	1389	1389	1371	389
25°	1252	1269	1233	1262	1244	577
35°	1079	1083	1048	1077	1066	675
45°	880	883	846	876	867	679
55°	665	668	632	662	654	597
65°	453	448	419	437	435	448
75°	234	229	211	216	217	249
85°	51	55	50	49	45	59
90°	3	6	4	5	2	5
95°	18	8	9	9	22	24
105°	117	115	18	134	126	124
115°	236	246	248	252	244	233
125°	343	354	356	355	348	306
135°	438	445	443	446	438	337
145°	515	520	516	520	511	321
155°	571	576	571	577	568	263
165°	606	611	605	611	604	171
175°	622	619	609	619	621	59
180°	616	616	616	616	616	



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CATALOG NUMBER: S123-DIP-ULO-2-35-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1441.0	1441.0	1441.0	1441.0	1441.0	1441.0	1441.0	1441.0	1441.0
2.5°	1453.0	1438.0	1442.0	1440.0	1429.0	1440.0	1441.0	1437.0	1451.0
5°	1446.0	1433.0	1441.0	1438.0	1434.0	1438.0	1439.0	1431.0	1444.0
7.5°	1436.0	1425.0	1434.0	1433.0	1431.0	1433.0	1432.0	1421.0	1433.0
10°	1422.0	1412.0	1424.0	1426.0	1423.0	1425.0	1420.0	1409.0	1417.0
12.5°	1403.0	1395.0	1410.0	1414.0	1412.0	1413.0	1406.0	1390.0	1398.0
15°	1378.0	1374.0	1394.0	1397.0	1389.0	1394.0	1389.0	1369.0	1371.0
17.5°	1354.0	1350.0	1372.0	1368.0	1357.0	1365.0	1366.0	1344.0	1346.0
20°	1323.0	1321.0	1344.0	1332.0	1318.0	1328.0	1337.0	1315.0	1316.0
22.5°	1289.0	1291.0	1308.0	1291.0	1277.0	1287.0	1304.0	1283.0	1281.0
25°	1252.0	1258.0	1269.0	1249.0	1233.0	1244.0	1262.0	1250.0	1244.0
27.5°	1214.0	1223.0	1227.0	1204.0	1188.0	1199.0	1222.0	1214.0	1204.0
30°	1172.0	1183.0	1182.0	1158.0	1140.0	1152.0	1176.0	1175.0	1162.0
32.5°	1126.0	1141.0	1133.0	1110.0	1095.0	1104.0	1128.0	1131.0	1116.0
35°	1079.0	1095.0	1083.0	1061.0	1048.0	1057.0	1077.0	1086.0	1066.0
37.5°	1031.0	1047.0	1033.0	1012.0	999.0	1008.0	1027.0	1038.0	1019.0
40°	982.0	997.0	983.0	965.0	949.0	959.0	976.0	988.0	971.0
42.5°	932.0	948.0	933.0	915.0	898.0	911.0	926.0	938.0	920.0
45°	880.0	897.0	883.0	862.0	846.0	859.0	876.0	886.0	867.0
47.5°	827.0	847.0	831.0	809.0	793.0	806.0	824.0	834.0	816.0
50°	774.0	791.0	779.0	756.0	740.0	752.0	772.0	780.0	763.0
52.5°	720.0	740.0	726.0	703.0	688.0	698.0	717.0	726.0	708.0
55°	665.0	681.0	668.0	649.0	632.0	644.0	662.0	668.0	654.0
57.5°	617.0	629.0	617.0	596.0	580.0	589.0	606.0	614.0	600.0
60°	562.0	573.0	561.0	541.0	527.0	535.0	549.0	559.0	545.0
62.5°	507.0	518.0	504.0	486.0	473.0	482.0	494.0	503.0	490.0
65°	453.0	463.0	448.0	432.0	419.0	428.0	437.0	447.0	435.0
67.5°	398.0	407.0	393.0	377.0	366.0	373.0	381.0	391.0	381.0
70°	344.0	351.0	339.0	324.0	314.0	320.0	327.0	335.0	326.0
72.5°	290.0	299.0	284.0	272.0	263.0	265.0	273.0	279.0	272.0
75°	234.0	240.0	229.0	219.0	211.0	213.0	216.0	225.0	217.0
77.5°	182.0	189.0	180.0	171.0	165.0	167.0	168.0	174.0	166.0
80°	133.0	139.0	133.0	126.0	122.0	123.0	123.0	127.0	119.0
82.5°	89.0	95.0	91.0	86.0	85.0	83.0	83.0	86.0	78.0
85°	51.0	58.0	55.0	51.0	50.0	49.0	49.0	51.0	45.0
87.5°	23.0	28.0	25.0	22.0	20.0	19.0	19.0	22.0	17.0
90°	3.0	7.0	6.0	4.0	4.0	4.0	5.0	6.0	2.0
92.5°	3.9	4.6	4.6	4.6	4.6	5.4	5.7	5.7	6.8
95°	18.2	6.8	7.9	8.6	8.9	8.9	8.6	7.5	22.1
97.5°	37.8	30.0	9.6	10.7	11.4	11.1	10.4	38.2	42.8
100°	61.4	69.6	10.7	12.1	12.8	12.5	11.8	78.2	67.8
102.5°	87.4	97.1	38.5	13.6	13.9	13.6	58.9	105.3	96.7
105°	116.7	124.9	114.6	22.8	17.5	27.8	134.2	133.1	126.3
107.5°	146.3	154.5	156.3	101.4	91.7	106.4	164.2	162.0	157.0
110°	176.7	182.7	186.7	188.4	153.8	190.9	193.4	190.6	186.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	207.0	213.4	217.0	219.5	216.6	221.3	222.0	219.1	215.2
115°	236.3	242.0	245.5	249.5	248.4	250.2	251.6	247.7	244.1
117.5°	263.7	270.9	273.0	277.0	278.4	277.0	278.4	275.2	272.0
120°	292.7	298.4	299.8	303.4	305.1	303.0	304.8	301.9	298.4
122.5°	318.7	323.7	327.3	328.7	330.5	328.0	330.1	326.9	323.7
125°	343.3	348.7	354.0	353.7	355.5	352.6	355.1	351.2	348.3
127.5°	366.9	372.2	378.7	377.6	379.0	376.2	379.4	374.7	372.2
130°	389.7	396.2	401.9	400.4	401.9	399.4	402.2	397.9	395.4
132.5°	414.4	420.4	424.0	422.6	422.6	421.1	425.1	420.4	416.9
135°	437.9	441.8	445.4	443.3	443.3	441.8	446.1	441.8	437.6
137.5°	457.9	462.2	464.7	463.3	463.3	461.5	465.8	461.8	457.5
140°	477.2	481.1	483.2	481.5	481.5	480.0	484.3	481.1	476.5
142.5°	496.1	499.7	501.8	498.9	498.9	497.5	502.9	499.3	493.9
145°	514.6	517.1	519.6	515.4	515.7	513.6	520.0	516.4	511.4
147.5°	528.6	533.2	536.1	531.1	531.1	529.3	536.1	532.5	526.8
150°	545.3	547.1	550.3	546.1	545.7	544.3	550.7	546.8	541.8
152.5°	556.8	561.0	563.9	559.3	558.9	557.1	564.3	560.0	555.0
155°	570.7	572.5	576.0	571.8	570.7	570.0	576.7	571.4	567.5
157.5°	580.7	582.8	587.8	583.9	581.0	582.1	587.5	581.4	578.2
160°	591.0	591.7	597.5	593.5	590.3	591.7	597.1	589.6	588.5
162.5°	599.9	600.3	605.7	601.0	598.5	598.9	605.3	597.8	596.0
165°	606.4	605.7	611.0	607.1	605.3	605.3	611.0	604.2	603.9
167.5°	612.4	612.1	614.6	612.1	611.7	609.9	614.2	609.6	610.7
170°	617.1	615.7	617.1	613.5	613.5	611.7	617.4	613.5	614.9
172.5°	621.4	618.5	618.5	613.5	612.4	612.1	618.9	616.7	618.9
175°	622.4	619.9	618.9	613.5	609.2	612.4	619.2	617.8	621.4
177.5°	623.5	619.6	618.5	612.1	611.0	611.4	618.9	618.2	622.4
180°	616.4	616.4	616.4	616.4	616.4	616.4	616.4	616.4	616.4

(END OF REPORT)