

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: P199459

Luminaire Tested: **S123-DIW-ULO-2-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199459
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-DIW-ULO-2-30-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-3000K, NO LENS
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

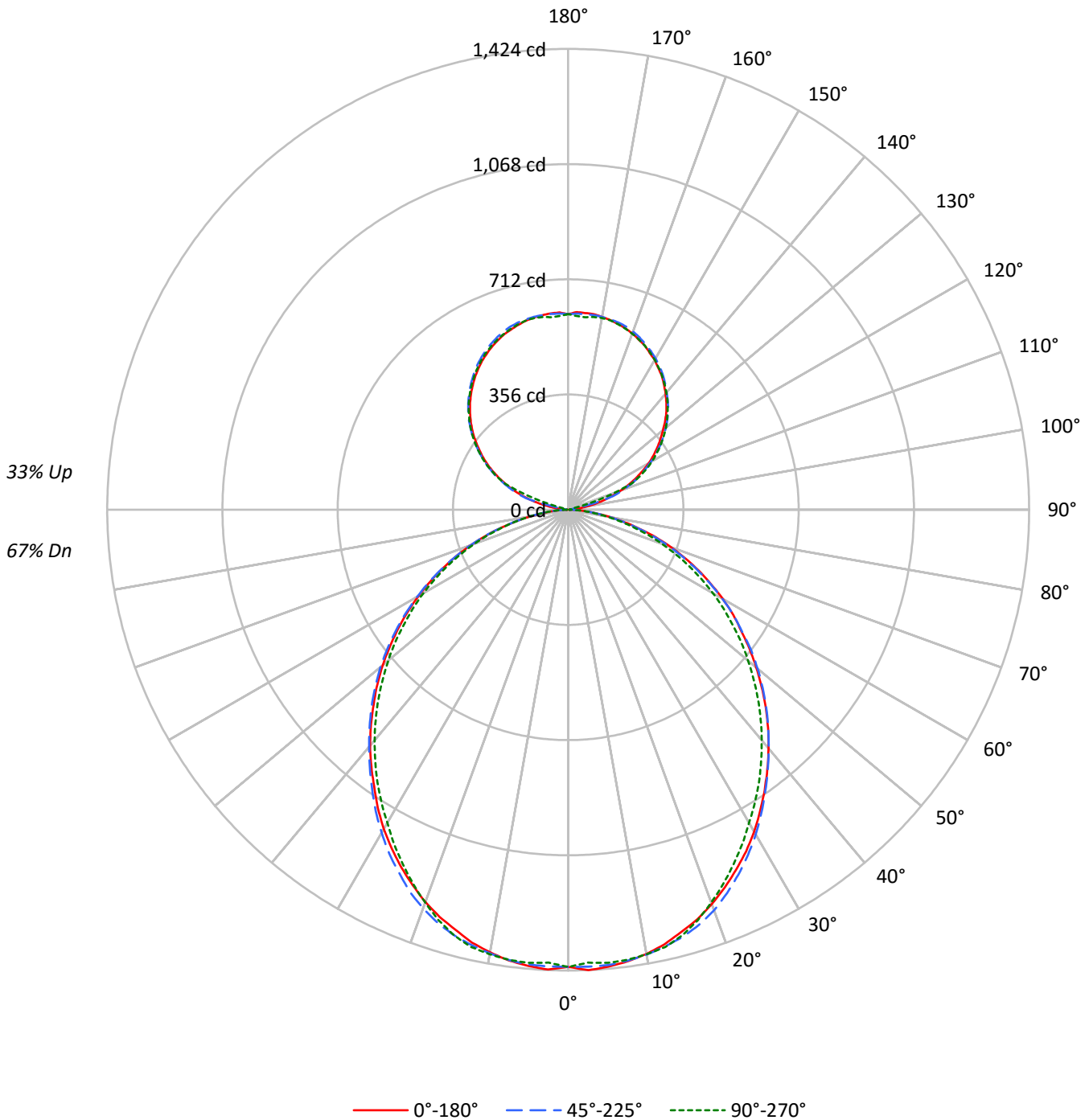
Lumens per Lamp: N/A
Luminaire Lumens: 5491.7 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

Input Watts (W): 55.1
Input Voltage (V): NR
Input Current (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	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°	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	2.4
10°-20°	382.3	7.0
20°-30°	565.0	10.3
30°-40°	657.6	12.0
40°-50°	659.9	12.0
50°-60°	577.6	10.5
60°-70°	426.6	7.8
70°-80°	233.0	4.2
80°-90°	60.2	1.1
90°-100°	14.5	0.3
100°-110°	99.5	1.8
110°-120°	238.1	4.3
120°-130°	308.1	5.6
130°-140°	334.4	6.1
140°-150°	316.6	5.8
150°-160°	258.6	4.7
160°-170°	168.0	3.1
170°-180°	57.6	1.0
0°-30°	1081.2	19.7
0°-40°	1738.9	31.7
0°-60°	2976.4	54.2
0°-90°	3696.3	67.3
90°-120°	352.0	6.4
90°-150°	1311.2	23.9
90°-180°	1795.0	32.7
0°-180°	5491.7	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	4
95°	18	8	9	8	22	24
105°	114	112	17	132	124	121
115°	232	241	244	247	239	228
125°	336	347	348	348	341	300
135°	429	437	434	437	429	330
145°	504	509	506	510	501	315
155°	559	565	559	565	556	258
165°	594	599	593	599	592	168
175°	610	607	597	607	609	58
180°	604	604	604	604	604	



TEST NUMBER: P199459

CATALOG NUMBER: S123-DIW-ULO-2-30-0048-1D-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°	3.8	4.5	4.5	4.5	4.5	5.2	5.6	5.6	6.6
95°	17.8	6.6	7.7	8.4	8.7	8.7	8.4	7.3	21.7
97.5°	37.1	29.4	9.4	10.5	11.2	10.8	10.1	37.4	42.0
100°	60.2	68.2	10.5	11.9	12.6	12.2	11.5	76.6	66.5
102.5°	85.7	95.2	37.8	13.3	13.6	13.3	57.7	103.2	94.8
105°	114.4	122.4	112.3	22.4	17.1	27.3	131.5	130.5	123.8
107.5°	143.4	151.5	153.2	99.4	89.9	104.3	160.9	158.8	153.9
110°	173.2	179.1	183.0	184.7	150.8	187.2	189.6	186.8	182.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	202.9	209.2	212.7	215.2	212.4	216.9	217.6	214.8	211.0
115°	231.6	237.2	240.7	244.5	243.5	245.2	246.6	242.8	239.3
117.5°	258.5	265.5	267.6	271.5	272.9	271.5	272.9	269.7	266.6
120°	286.9	292.5	293.9	297.4	299.1	297.0	298.8	296.0	292.5
122.5°	312.4	317.3	320.8	322.2	324.0	321.5	323.6	320.5	317.3
125°	336.5	341.8	347.0	346.7	348.4	345.6	348.1	344.2	341.4
127.5°	359.6	364.9	371.2	370.1	371.5	368.7	371.9	367.3	364.9
130°	382.0	388.3	393.9	392.5	393.9	391.5	394.3	390.1	387.6
132.5°	406.2	412.1	415.6	414.2	414.2	412.8	416.7	412.1	408.6
135°	429.3	433.1	436.6	434.5	434.5	433.1	437.3	433.1	428.9
137.5°	448.8	453.0	455.5	454.1	454.1	452.3	456.5	452.7	448.5
140°	467.7	471.6	473.7	471.9	471.9	470.5	474.7	471.6	467.0
142.5°	486.3	489.8	491.9	489.1	489.1	487.7	492.9	489.4	484.2
145°	504.5	506.9	509.4	505.2	505.5	503.4	509.7	506.2	501.3
147.5°	518.1	522.7	525.5	520.6	520.6	518.8	525.5	522.0	516.4
150°	534.6	536.3	539.5	535.3	534.9	533.5	539.8	536.0	531.1
152.5°	545.8	550.0	552.8	548.2	547.9	546.1	553.1	548.9	544.0
155°	559.4	561.1	564.6	560.4	559.4	558.7	565.3	560.1	556.2
157.5°	569.2	571.3	576.2	572.3	569.5	570.6	575.8	569.9	566.7
160°	579.3	580.0	585.6	581.8	578.6	580.0	585.3	577.9	576.9
162.5°	588.1	588.4	593.7	589.1	586.7	587.0	593.3	586.0	584.2
165°	594.4	593.7	598.9	595.1	593.3	593.3	598.9	592.3	591.9
167.5°	600.3	600.0	602.4	600.0	599.6	597.9	602.1	597.5	598.6
170°	604.9	603.5	604.9	601.4	601.4	599.6	605.2	601.4	602.8
172.5°	609.1	606.3	606.3	601.4	600.3	600.0	606.6	604.5	606.6
175°	610.1	607.7	606.6	601.4	597.2	600.3	607.0	605.6	609.1
177.5°	611.2	607.3	606.3	600.0	598.9	599.3	606.6	605.9	610.1
180°	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2	604.2

(END OF REPORT)