

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: P199497

Luminaire Tested: **S124-DIW-U2-LO-35-0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199497
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-U2-LO-35-0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LL2-3500K, SATIN WHITE DIFFUSER
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

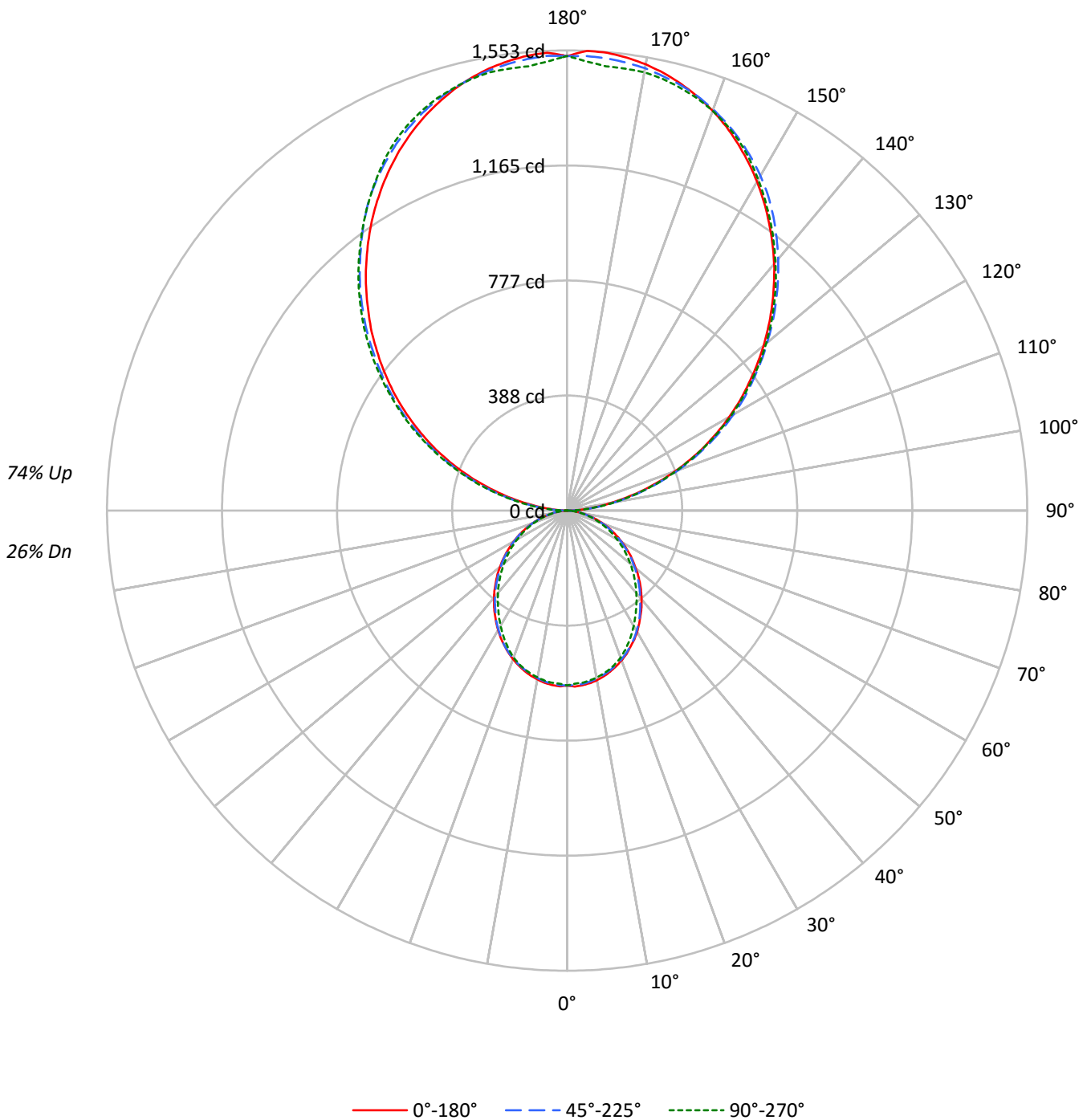
Lumens per Lamp: N/A
Luminaire Lumens: 5698.1 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Indirect

Input Watts (W): 52.3
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

TEST NUMBER: P199497

CATALOG NUMBER: S124-DIW-U2-LO-35-0048-1D-UDD-1-5-W

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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	88	85	81	82	79	76	73	61	59	57	45	44	42	30	29	29	22
2	84	77	71	66	75	69	64	60	54	50	47	39	37	35	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	52	47	62	54	47	42	42	37	34	31	28	26	21	19	18	13
5	64	53	45	40	57	48	41	36	37	33	29	28	25	22	19	17	15	12
6	59	48	40	34	52	43	36	31	34	29	25	25	22	19	17	15	14	10
7	54	43	35	30	48	38	32	27	30	26	22	23	19	17	16	14	12	9
8	50	39	31	26	45	35	28	24	28	23	19	21	17	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	13	13	11	10	7
10	44	32	25	21	39	29	23	19	23	19	15	17	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4668	4668	4668
5°	4660	4217	4652
10°	4594	3832	4575
15°	4495	3487	4472
20°	4380	3150	4348
25°	4241	2808	4202
30°	4095	2487	4042
35°	3920	2191	3865
40°	3746	1929	3681
45°	3557	1689	3488
50°	3345	1461	3285
55°	3155	1250	3072
60°	2918	1047	2834
65°	2684	849	2578
70°	2385	653	2273
75°	2007	460	1859
80°	1506	280	1410
85°	885	124	837



TEST NUMBER: P199497

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	1.0
10°-20°	156.7	2.7
20°-30°	229.5	4.0
30°-40°	263.1	4.6
40°-50°	259.3	4.6
50°-60°	223.5	3.9
60°-70°	163.0	2.9
70°-80°	88.9	1.6
80°-90°	23.3	0.4
90°-100°	78.7	1.4
100°-110°	286.0	5.0
110°-120°	506.3	8.9
120°-130°	673.1	11.8
130°-140°	756.9	13.3
140°-150°	744.2	13.1
150°-160°	628.1	11.0
160°-170°	416.6	7.3
170°-180°	145.2	2.5
0°-30°	441.8	7.8
0°-40°	704.8	12.4
0°-60°	1187.7	20.8
0°-90°	1463.0	25.7
90°-120°	870.9	15.3
90°-150°	3045.2	53.4
90°-180°	4235.0	74.3
0°-180°	5698.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	590	590	590	590	590	
5°	592	588	584	587	591	56
15°	562	558	554	555	560	159
25°	507	505	491	501	502	234
35°	432	428	406	422	426	270
45°	347	340	321	334	340	268
55°	259	254	236	249	252	231
65°	172	168	155	164	165	170
75°	88	85	78	81	82	94
85°	20	20	19	19	19	23
90°	1	1	1	1	1	6
95°	66	73	71	67	51	72
105°	265	278	274	268	247	281
115°	511	524	515	508	489	505
125°	748	765	758	747	725	670
135°	978	997	988	979	949	754
145°	1187	1213	1195	1194	1159	743
155°	1365	1380	1375	1365	1340	629
165°	1490	1486	1477	1476	1472	420
175°	1551	1532	1505	1530	1541	147
180°	1534	1534	1534	1534	1534	



TEST NUMBER: P199497

CATALOG NUMBER: S124-DIW-U2-LO-35-0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	590.3	590.3	590.3	590.3	590.3	590.3	590.3	590.3	590.3
2.5°	594.6	587.8	590.0	588.5	584.6	588.5	589.6	587.5	593.9
5°	591.7	585.3	587.5	585.3	583.5	585.0	586.7	584.2	590.7
7.5°	587.5	580.7	582.5	580.7	578.9	580.3	581.4	579.2	586.0
10°	581.4	574.3	576.0	573.9	571.8	573.2	574.3	572.1	578.9
12.5°	572.8	566.0	567.5	566.0	564.3	564.6	565.3	563.2	570.3
15°	562.5	555.7	558.2	556.8	554.3	555.7	555.3	552.8	559.6
17.5°	550.7	544.3	547.1	545.7	542.1	544.3	544.3	540.3	547.5
20°	537.8	531.1	535.0	531.4	527.5	529.6	531.4	526.8	533.9
22.5°	523.6	516.4	521.1	514.6	510.4	512.9	517.1	512.2	518.6
25°	506.8	501.1	505.4	496.4	490.7	494.3	501.1	496.1	502.2
27.5°	490.4	484.7	488.2	478.2	470.4	475.0	483.6	479.3	484.7
30°	472.2	467.5	469.3	457.5	449.3	454.3	464.3	461.8	466.1
32.5°	452.2	448.6	448.6	436.1	427.6	433.3	444.0	443.3	446.1
35°	432.2	430.1	427.6	414.0	405.8	411.1	421.5	424.4	426.1
37.5°	411.9	410.4	405.8	392.6	384.7	390.4	400.1	404.4	405.4
40°	390.8	390.1	383.7	371.2	363.3	369.0	379.0	384.4	384.0
42.5°	369.4	370.1	362.3	350.1	342.3	348.0	357.3	364.4	362.6
45°	347.3	349.4	340.1	329.1	320.9	326.9	334.4	343.3	340.5
47.5°	325.8	328.3	318.7	307.3	299.4	305.9	313.4	323.0	318.7
50°	301.6	306.6	297.3	285.9	278.0	284.1	293.0	301.2	296.2
52.5°	280.5	284.1	275.9	264.8	257.3	262.3	271.2	279.5	274.1
55°	258.8	262.7	254.5	243.4	236.3	241.3	249.1	257.3	252.0
57.5°	235.9	239.8	232.3	222.3	215.6	220.9	229.1	234.8	229.8
60°	213.8	218.8	210.6	200.9	195.2	199.5	205.9	212.7	207.7
62.5°	192.4	197.0	189.2	180.2	174.9	178.8	185.6	190.9	186.3
65°	171.7	174.5	167.7	159.5	154.9	157.4	163.5	169.5	164.9
67.5°	150.6	153.5	146.7	139.5	134.9	137.4	142.4	148.1	143.8
70°	129.2	131.7	126.0	119.6	115.6	118.1	122.8	127.1	123.1
72.5°	108.9	110.6	105.3	100.3	97.4	99.2	102.4	106.4	104.6
75°	88.2	90.3	84.9	80.7	78.2	78.9	81.4	84.6	81.7
77.5°	68.5	70.7	66.4	63.2	61.7	62.1	63.9	66.4	62.8
80°	50.3	52.1	49.6	46.8	45.3	46.0	47.1	48.5	47.1
82.5°	33.9	35.7	33.9	32.1	31.1	31.8	32.1	32.8	31.8
85°	20.0	21.4	20.3	19.3	18.9	18.9	19.3	20.0	18.9
87.5°	8.9	10.0	9.3	8.6	7.5	7.9	8.2	8.9	8.2
90°	0.7	1.8	1.4	1.1	1.1	1.1	1.4	1.8	0.7
92.5°	30.0	34.0	35.0	32.0	32.0	31.0	29.0	28.0	18.0
95°	66.0	72.0	73.0	73.0	71.0	69.0	67.0	62.0	51.0
97.5°	107.0	114.0	116.0	114.0	115.0	113.0	108.0	103.0	92.0
100°	154.0	163.0	165.0	163.0	164.0	159.0	157.0	152.0	139.0
102.5°	206.0	217.0	218.0	216.0	216.0	212.0	210.0	204.0	191.0
105°	265.0	277.0	278.0	274.0	274.0	270.0	268.0	262.0	247.0
107.5°	325.0	337.0	337.0	333.0	333.0	330.0	326.0	322.0	307.0
110°	387.0	397.0	399.0	394.0	393.0	390.0	386.0	380.0	367.0



TEST NUMBER: P199497

CATALOG NUMBER: S124-DIW-U2-LO-35-0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	449.0	459.0	461.0	455.0	454.0	448.0	447.0	440.0	427.0
115°	511.0	521.0	524.0	517.0	515.0	508.0	508.0	501.0	489.0
117.5°	571.0	583.0	586.0	578.0	577.0	571.0	567.0	561.0	548.0
120°	631.0	646.0	648.0	639.0	638.0	631.0	629.0	621.0	608.0
122.5°	691.0	706.0	709.0	701.0	698.0	689.0	688.0	681.0	667.0
125°	748.0	765.0	765.0	761.0	758.0	751.0	747.0	739.0	725.0
127.5°	807.0	825.0	824.0	821.0	818.0	808.0	805.0	797.0	782.0
130°	865.0	881.0	881.0	879.0	877.0	868.0	863.0	855.0	838.0
132.5°	922.0	938.0	940.0	935.0	933.0	921.0	922.0	912.0	895.0
135°	978.0	992.0	997.0	989.0	988.0	975.0	979.0	966.0	949.0
137.5°	1033.0	1044.0	1053.0	1043.0	1042.0	1029.0	1035.0	1018.0	1003.0
140°	1087.0	1096.0	1108.0	1096.0	1094.0	1082.0	1088.0	1070.0	1057.0
142.5°	1138.0	1146.0	1161.0	1148.0	1145.0	1134.0	1141.0	1120.0	1108.0
145°	1187.0	1193.0	1213.0	1199.0	1195.0	1185.0	1194.0	1168.0	1159.0
147.5°	1236.0	1239.0	1262.0	1249.0	1243.0	1235.0	1244.0	1215.0	1208.0
150°	1282.0	1282.0	1305.0	1295.0	1290.0	1281.0	1287.0	1259.0	1254.0
152.5°	1325.0	1323.0	1344.0	1338.0	1335.0	1325.0	1327.0	1301.0	1298.0
155°	1365.0	1361.0	1380.0	1377.0	1375.0	1365.0	1365.0	1339.0	1340.0
157.5°	1403.0	1395.0	1413.0	1412.0	1408.0	1400.0	1398.0	1375.0	1378.0
160°	1436.0	1429.0	1441.0	1439.0	1436.0	1428.0	1428.0	1408.0	1413.0
162.5°	1465.0	1456.0	1466.0	1460.0	1459.0	1450.0	1454.0	1437.0	1444.0
165°	1490.0	1481.0	1486.0	1478.0	1477.0	1469.0	1476.0	1464.0	1472.0
167.5°	1512.0	1502.0	1501.0	1494.0	1492.0	1486.0	1494.0	1487.0	1496.0
170°	1529.0	1519.0	1516.0	1504.0	1502.0	1497.0	1509.0	1507.0	1515.0
172.5°	1542.0	1532.0	1525.0	1511.0	1504.0	1505.0	1521.0	1521.0	1530.0
175°	1551.0	1540.0	1532.0	1518.0	1505.0	1513.0	1530.0	1531.0	1541.0
177.5°	1553.0	1542.0	1535.0	1522.0	1517.0	1518.0	1536.0	1536.0	1547.0
180°	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0	1534.0

(END OF REPORT)