

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: P199510

Luminaire Tested: **S124-DIW-ULO-2-35-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199510
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28061)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-ULO-2-35-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-3500K, NO LENS
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

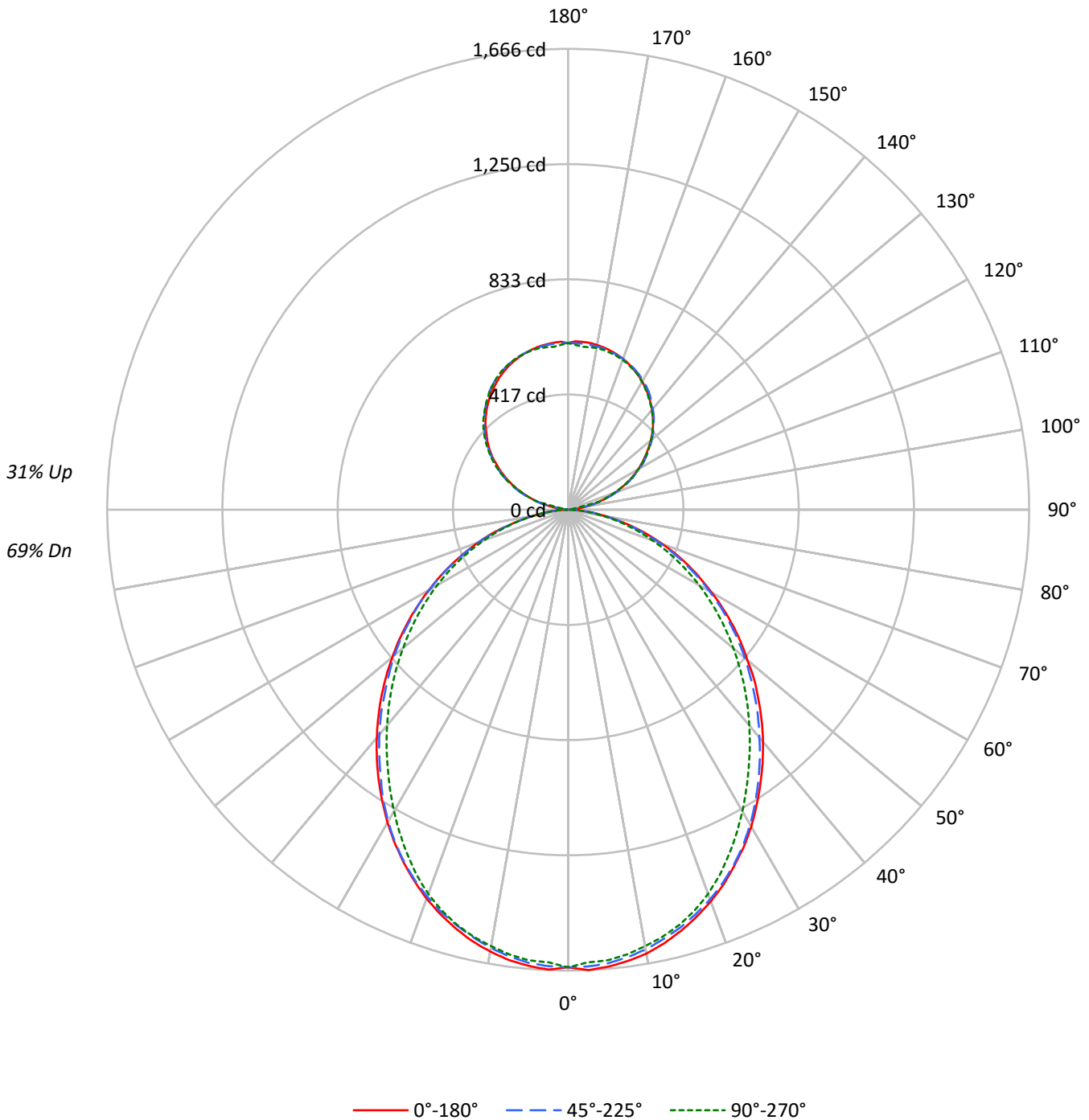
Lumens per Lamp: N/A
Luminaire Lumens: 5906.2 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	102	98	94	90	96	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	86	79	74	88	81	76	71	73	68	65	65	62	59	58	55	53	49
3	85	75	68	62	80	72	65	59	64	59	55	58	53	50	51	48	45	42
4	78	67	59	53	73	64	56	51	57	51	47	51	47	43	46	42	39	36
5	72	60	51	45	68	57	49	44	51	45	40	46	41	37	42	37	34	31
6	66	54	45	39	62	51	44	38	46	40	35	42	37	33	38	34	30	28
7	61	49	41	35	58	47	39	34	42	36	31	38	33	29	35	30	27	25
8	57	44	36	31	54	42	35	30	39	32	28	35	30	26	32	27	24	22
9	53	41	33	28	50	39	32	27	36	29	25	32	27	24	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13080	13080	13080
5°	13057	11816	13033
10°	12873	10735	12818
15°	12593	9770	12529
20°	12272	8825	12183
25°	11882	7870	11773
30°	11473	6970	11325
35°	10985	6140	10831
40°	10495	5406	10313
45°	9967	4731	9772
50°	9371	4094	9204
55°	8837	3502	8605
60°	8174	2934	7942
65°	7520	2380	7223
70°	6684	1831	6370
75°	5621	1287	5211
80°	4222	784	3953
85°	2479	347	2346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	2.6
10°-20°	439.0	7.4
20°-30°	643.1	10.9
30°-40°	737.1	12.5
40°-50°	726.6	12.3
50°-60°	626.4	10.6
60°-70°	456.7	7.7
70°-80°	249.1	4.2
80°-90°	65.4	1.1
90°-100°	15.7	0.3
100°-110°	121.8	2.1
110°-120°	235.7	4.0
120°-130°	306.4	5.2
130°-140°	332.6	5.6
140°-150°	314.8	5.3
150°-160°	256.8	4.3
160°-170°	166.2	2.8
170°-180°	57.2	1.0
0°-30°	1237.8	21.0
0°-40°	1974.9	33.4
0°-60°	3327.9	56.3
0°-90°	4099.1	69.4
90°-120°	373.2	6.3
90°-150°	1327.0	22.5
90°-180°	1807.0	30.6
0°-180°	5906.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1654	1654	1654	1654	1654	
5°	1658	1646	1635	1644	1655	157
15°	1576	1564	1553	1556	1568	444
25°	1420	1416	1375	1404	1407	654
35°	1211	1198	1137	1181	1194	757
45°	973	953	899	937	954	751
55°	725	713	662	698	706	647
65°	481	470	434	458	462	476
75°	247	238	219	228	229	262
85°	56	57	53	54	53	64
90°	2	4	3	4	2	5
95°	21	5	6	6	19	27
105°	121	125	120	122	118	128
115°	237	243	238	240	231	235
125°	341	348	344	340	335	305
135°	433	438	434	429	422	334
145°	506	512	503	504	495	316
155°	560	563	558	558	551	258
165°	595	592	587	588	588	168
175°	609	602	591	602	606	58
180°	602	602	602	602	602	



TEST NUMBER: P199510

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0	1654.0
2.5°	1666.0	1647.0	1653.0	1649.0	1638.0	1649.0	1652.0	1646.0	1664.0
5°	1658.0	1640.0	1646.0	1640.0	1635.0	1639.0	1644.0	1637.0	1655.0
7.5°	1646.0	1627.0	1632.0	1627.0	1622.0	1626.0	1629.0	1623.0	1642.0
10°	1629.0	1609.0	1614.0	1608.0	1602.0	1606.0	1609.0	1603.0	1622.0
12.5°	1605.0	1586.0	1590.0	1586.0	1581.0	1582.0	1584.0	1578.0	1598.0
15°	1576.0	1557.0	1564.0	1560.0	1553.0	1557.0	1556.0	1549.0	1568.0
17.5°	1543.0	1525.0	1533.0	1529.0	1519.0	1525.0	1525.0	1514.0	1534.0
20°	1507.0	1488.0	1499.0	1489.0	1478.0	1484.0	1489.0	1476.0	1496.0
22.5°	1467.0	1447.0	1460.0	1442.0	1430.0	1437.0	1449.0	1435.0	1453.0
25°	1420.0	1404.0	1416.0	1391.0	1375.0	1385.0	1404.0	1390.0	1407.0
27.5°	1374.0	1358.0	1368.0	1340.0	1318.0	1331.0	1355.0	1343.0	1358.0
30°	1323.0	1310.0	1315.0	1282.0	1259.0	1273.0	1301.0	1294.0	1306.0
32.5°	1267.0	1257.0	1257.0	1222.0	1198.0	1214.0	1244.0	1242.0	1250.0
35°	1211.0	1205.0	1198.0	1160.0	1137.0	1152.0	1181.0	1189.0	1194.0
37.5°	1154.0	1150.0	1137.0	1100.0	1078.0	1094.0	1121.0	1133.0	1136.0
40°	1095.0	1093.0	1075.0	1040.0	1018.0	1034.0	1062.0	1077.0	1076.0
42.5°	1035.0	1037.0	1015.0	981.0	959.0	975.0	1001.0	1021.0	1016.0
45°	973.0	979.0	953.0	922.0	899.0	916.0	937.0	962.0	954.0
47.5°	913.0	920.0	893.0	861.0	839.0	857.0	878.0	905.0	893.0
50°	845.0	859.0	833.0	801.0	779.0	796.0	821.0	844.0	830.0
52.5°	786.0	796.0	773.0	742.0	721.0	735.0	760.0	783.0	768.0
55°	725.0	736.0	713.0	682.0	662.0	676.0	698.0	721.0	706.0
57.5°	661.0	672.0	651.0	623.0	604.0	619.0	642.0	658.0	644.0
60°	599.0	613.0	590.0	563.0	547.0	559.0	577.0	596.0	582.0
62.5°	539.0	552.0	530.0	505.0	490.0	501.0	520.0	535.0	522.0
65°	481.0	489.0	470.0	447.0	434.0	441.0	458.0	475.0	462.0
67.5°	422.0	430.0	411.0	391.0	378.0	385.0	399.0	415.0	403.0
70°	362.0	369.0	353.0	335.0	324.0	331.0	344.0	356.0	345.0
72.5°	305.0	310.0	295.0	281.0	273.0	278.0	287.0	298.0	293.0
75°	247.0	253.0	238.0	226.0	219.0	221.0	228.0	237.0	229.0
77.5°	192.0	198.0	186.0	177.0	173.0	174.0	179.0	186.0	176.0
80°	141.0	146.0	139.0	131.0	127.0	129.0	132.0	136.0	132.0
82.5°	95.0	100.0	95.0	90.0	87.0	89.0	90.0	92.0	89.0
85°	56.0	60.0	57.0	54.0	53.0	53.0	54.0	56.0	53.0
87.5°	25.0	28.0	26.0	24.0	21.0	22.0	23.0	25.0	23.0
90°	2.0	5.0	4.0	3.0	3.0	3.0	4.0	5.0	2.0
92.5°	6.8	3.6	3.6	3.6	3.6	3.6	3.6	3.9	4.6
95°	21.1	13.6	5.4	5.7	5.7	5.7	5.7	9.3	18.9
97.5°	41.0	47.8	10.4	6.8	6.8	6.8	10.4	45.3	38.2
100°	65.0	71.4	52.1	16.4	12.1	15.3	45.7	67.5	61.7
102.5°	91.7	99.9	96.0	53.9	31.1	46.0	93.2	95.6	89.2
105°	121.3	128.5	124.6	126.3	119.6	121.7	121.7	123.1	117.8
107.5°	150.6	156.7	154.5	153.1	147.8	149.2	152.8	152.0	146.0
110°	179.9	185.9	185.9	181.3	174.9	177.4	183.1	179.5	174.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	209.1	213.8	214.9	212.4	204.9	208.4	211.6	205.9	202.7
115°	236.6	243.4	242.7	243.0	237.7	237.7	239.5	235.2	230.6
117.5°	266.2	271.2	270.2	270.5	267.0	265.5	265.2	262.3	257.3
120°	292.3	298.0	298.7	296.2	293.7	290.9	292.7	288.7	283.4
122.5°	316.9	323.4	324.4	321.9	319.4	316.2	317.6	313.4	308.4
125°	341.2	348.3	348.3	346.5	344.1	340.8	340.5	336.9	335.1
127.5°	365.5	373.7	372.2	370.5	368.3	364.8	363.0	360.8	358.0
130°	390.1	395.8	394.4	392.9	391.5	387.2	385.8	383.7	380.5
132.5°	412.6	415.8	416.5	413.6	413.6	408.3	407.9	405.4	399.7
135°	433.3	436.5	437.9	433.6	433.6	428.3	429.4	425.8	422.2
137.5°	452.9	455.4	457.2	452.2	452.5	447.6	449.3	443.3	441.8
140°	471.8	472.9	476.1	470.8	470.0	465.8	468.3	462.2	460.4
142.5°	488.6	490.0	493.9	488.2	486.5	483.2	486.5	479.0	477.9
145°	505.7	506.1	511.8	505.0	502.9	500.4	504.3	495.4	494.7
147.5°	520.7	520.0	526.8	521.1	518.9	516.4	520.7	510.4	510.4
150°	534.6	533.9	540.3	535.7	533.6	531.4	533.9	524.3	524.3
152.5°	548.2	545.7	552.1	548.2	547.5	544.3	546.4	537.1	538.6
155°	559.6	557.1	563.2	560.0	558.5	556.0	557.5	548.6	550.7
157.5°	570.7	566.8	572.1	570.7	568.2	566.8	566.8	559.6	562.1
160°	580.3	575.7	580.3	578.2	576.0	574.3	575.7	568.5	571.8
162.5°	588.2	583.9	586.4	583.5	582.5	579.6	582.5	576.7	580.3
165°	594.6	590.0	591.7	587.8	587.1	585.0	588.5	584.6	588.2
167.5°	600.3	596.0	595.3	591.4	591.4	588.5	592.8	590.7	594.2
170°	604.2	600.7	599.2	593.5	593.5	591.0	597.1	595.3	599.6
172.5°	608.2	603.5	601.0	595.0	592.5	592.8	600.3	598.9	603.2
175°	608.9	605.3	602.4	596.0	591.4	594.6	602.1	602.4	605.7
177.5°	609.6	606.0	602.4	597.1	596.4	595.7	603.5	603.2	607.8
180°	602.4	602.4	602.4	602.4	602.4	602.4	602.4	602.4	602.4

(END OF REPORT)