Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P902566

Luminaire Tested: DFN2DIP-HX3F0-050D030US830-FLLFLL

Issue Date: 11/21/2024

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Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P902566
	REPORT IS A COMBINATION OF REPORTS P899205 AND P896089
Test Lab:	INNOVATION CENTER
Issue Date:	11/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	NEO-RAY
Catalog Number:	DFN2DIP-HX3F0-050D030US830-FLLFLL
Description:	3 foot, Hexagon Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7168.0 lumens
Efficiency:	N/A
Efficacy:	105.9 lumens/watt
Spacing Criteria (0/90/45):	1.2 / 1.16 / 1.29
Luminous Opening:	Rectangular w/ Sides (W: 2.84' x L: 3.28' x H: 0.1')
CIE Type:	Semi-Direct

Input Watts (W):	67.7
Input Voltage (V):	
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.9951
Total Harmonic Distortion (THDi):	0.07
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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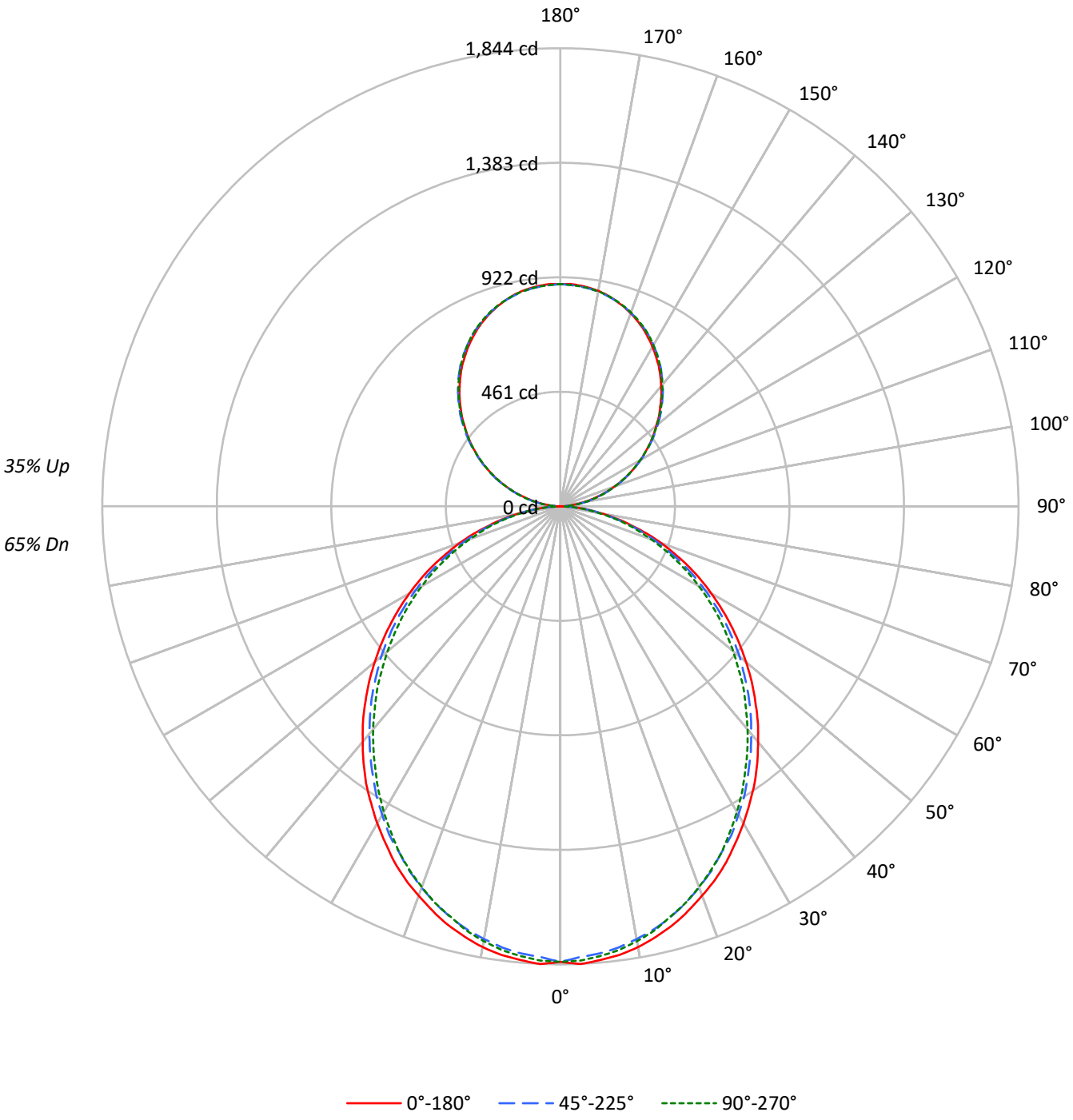
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	104	104	104	104	92	92	92	80	80	80	70	70	70	65
1	101	97	93	89	95	91	88	84	81	78	75	71	69	67	62	60	59	55
2	92	85	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50	46
3	84	74	67	61	79	70	63	58	62	57	53	55	51	47	48	45	42	39
4	77	66	58	52	72	62	55	49	55	50	45	49	44	41	43	40	37	33
5	71	59	50	44	66	56	48	42	50	44	39	44	39	35	39	35	32	29
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28	26
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	30	26	22	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	27	23	20	18
10	49	37	29	24	46	35	28	23	32	26	22	28	24	20	25	21	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2124	2124	2124
5°	2127	2093	2108
10°	2108	2063	2078
15°	2076	2028	2032
20°	2034	1979	1985
25°	1991	1921	1931
30°	1938	1867	1863
35°	1887	1804	1791
40°	1825	1740	1722
45°	1763	1675	1652
50°	1696	1608	1570
55°	1624	1529	1495
60°	1544	1437	1409
65°	1456	1340	1308
70°	1345	1223	1198
75°	1190	1082	1095
80°	1003	903	902
85°	711	597	585

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1763 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.6	2.4
10°-20°	485.6	6.8
20°-30°	713.7	10.0
30°-40°	828.9	11.6
40°-50°	827.8	11.5
50°-60°	721.8	10.1
60°-70°	533.6	7.4
70°-80°	301.9	4.2
80°-90°	82.2	1.1
90°-100°	55.3	0.8
100°-110°	175.8	2.5
110°-120°	300.9	4.2
120°-130°	395.7	5.5
130°-140°	444.2	6.2
140°-150°	435.6	6.1
150°-160°	365.4	5.1
160°-170°	242.3	3.4
170°-180°	84.7	1.2
0°-30°	1371.9	19.1
0°-40°	2200.7	30.7
0°-60°	3750.4	52.3
0°-90°	4668.1	65.1
90°-120°	532.1	7.4
90°-150°	1807.5	25.2
90°-180°	2500.0	34.9
0°-180°	7168.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1834	1834	1834	1834	1834	
5°	1834	1827	1807	1821	1818	174
15°	1746	1735	1712	1719	1710	492
25°	1580	1566	1536	1539	1536	727
35°	1363	1346	1317	1307	1298	851
45°	1109	1097	1070	1051	1044	856
55°	839	829	808	786	778	750
65°	566	555	538	522	513	560
75°	296	293	284	273	277	316
85°	72	70	69	63	62	81
90°	1	10	26	25	26	7
95°	39	47	48	48	47	44
105°	162	164	166	167	167	171
115°	302	306	305	304	302	299
125°	439	446	444	441	440	392
135°	568	576	578	577	575	439
145°	690	695	699	700	697	431
155°	789	791	793	797	795	363
165°	858	857	857	862	859	242
175°	893	890	889	894	890	85
180°	894	894	894	894	894	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	*1833.7*	1833.7	1833.7	1833.7	1833.7
2.5°	*1844.4*	*1835.6*	*1816.2*	*1833.7*	*1830.4*
5°	*1833.7*	1826.8	1807.3	1821.4	1818.1
7.5°	*1821.4*	1810.9	1791.5	1805.7	1802.1
10°	*1802.1*	1789.8	1768.7	1782.6	1777.4
12.5°	*1775.6*	1765.1	1744.0	1752.8	1749.2
15°	*1745.6*	1735.1	1712.1	1719.3	1710.4
17.5°	*1708.5*	1698.1	1675.1	1683.9	1675.1
20°	*1668.0*	1657.6	1632.9	1638.0	1631.2
22.5°	*1627.6*	1611.7	1588.7	1588.7	1585.1
25°	*1579.9*	1565.8	1535.9	1539.3	1535.9
27.5°	*1526.9*	1514.6	1491.8	1486.5	1477.7
30°	*1474.1*	1460.0	1433.6	1428.3	1421.3
32.5°	*1417.7*	1407.2	1378.9	1368.3	1361.2
35°	*1363.0*	1345.5	1317.2	1306.6	1297.8
37.5°	*1301.3*	1285.4	1257.2	1244.8	1236.0
40°	*1237.9*	1223.7	1195.4	1179.7	1172.6
42.5°	*1176.2*	1162.0	1133.9	1116.1	1105.6
45°	*1109.2*	1096.8	1070.3	1051.0	1043.9
47.5°	*1043.9*	1031.5	1003.3	983.8	973.4
50°	*975.1*	966.3	941.6	916.9	908.0
52.5°	*908.0*	895.7	872.9	853.5	841.1
55°	*839.4*	828.8	807.6	786.5	777.7
57.5°	*770.5*	761.8	738.8	717.7	710.5
60°	*701.7*	694.8	670.1	650.6	645.5
62.5°	*634.8*	622.5	604.8	587.2	580.1
65°	*566.1*	555.4	537.8	522.0	513.1
67.5°	*495.6*	486.6	470.9	458.5	451.4
70°	*430.3*	423.2	407.3	394.9	388.0
72.5°	*363.4*	356.2	347.4	335.1	329.8
75°	*296.1*	292.8	283.8	273.3	276.9
77.5°	*236.3*	229.1	225.6	220.4	215.2
80°	*176.4*	174.6	171.0	165.8	162.2
82.5°	*119.9*	119.9	118.2	111.1	111.1
85°	*72.2*	70.5	68.8	63.4	61.7
87.5°	*31.8*	28.3	24.7	19.4	17.6
90°	*0.8*	9.7	26.4	24.8	25.6
92.5°	*16.7*	22.6	23.5	24.2	24.2
95°	*39.4*	46.9	48.3	48.3	46.9
97.5°	*65.5*	72.5	75.5	75.5	75.5
100°	*95.7*	101.9	104.1	104.1	103.3
102.5°	*127.5*	132.1	135.1	135.9	135.1
105°	*162.3*	164.5	166.1	167.4	167.4
107.5°	*196.8*	200.0	200.0	200.6	196.8
110°	*230.3*	234.6	234.6	234.6	232.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	*266.4*	271.0	270.1	268.0	266.4
115°	*302.0*	306.2	304.9	304.2	302.0
117.5°	*337.2*	343.2	339.4	337.2	335.1
120°	*372.9*	378.8	372.9	372.9	370.4
122.5°	*405.2*	412.7	409.0	406.8	405.2
125°	*439.2*	445.9	443.7	441.3	440.5
127.5°	*472.3*	480.7	477.8	474.5	472.3
130°	*503.3*	513.0	511.7	510.1	507.1
132.5°	*538.1*	545.6	546.2	542.4	540.3
135°	*568.1*	576.4	578.1	577.2	575.0
137.5°	*601.4*	608.2	609.5	609.1	605.8
140°	*630.8*	637.6	641.4	641.4	638.4
142.5°	*661.1*	667.8	670.0	670.8	667.8
145°	*689.7*	695.0	699.4	700.1	697.2
147.5°	*715.3*	722.0	725.2	726.6	723.6
150°	*741.7*	746.3	749.2	751.7	749.2
152.5°	*765.2*	769.7	773.5	776.5	773.5
155°	*788.6*	790.7	793.1	796.9	794.6
157.5°	*808.8*	810.4	811.8	817.2	813.4
160°	*826.9*	828.5	829.3	833.9	830.7
162.5°	*843.6*	843.6	844.4	849.5	845.7
165°	*857.9*	857.1	857.1	862.4	858.7
167.5°	*870.8*	868.4	868.4	873.7	870.0
170°	*880.5*	878.4	877.6	883.0	878.4
172.5°	*887.2*	885.1	884.3	889.7	885.1
175°	*892.7*	890.5	888.9	894.3	889.7
177.5°	*895.6*	893.4	891.8	896.5	891.8
180°	*894.3*	894.3	894.3	894.3	894.3

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CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	11.13	12.15	11.95	12.99	14.03	10.71	11.72	11.52	12.56	13.60
	3H	12.80	13.71	13.63	14.56	15.62	12.33	13.24	13.16	14.09	15.16
	4H	13.39	14.25	14.23	15.11	16.18	12.92	13.78	13.76	14.64	15.71
	6H	13.79	14.59	14.65	15.45	16.54	13.32	14.12	14.18	14.98	16.07
	8H	13.90	14.65	14.76	15.53	16.62	13.43	14.18	14.29	15.07	16.15
	12H	13.95	14.67	14.82	15.54	16.66	13.47	14.19	14.34	15.07	16.18
4H	2H	11.61	12.47	12.46	13.33	14.40	11.27	12.13	12.12	12.99	14.06
	3H	13.48	14.20	14.34	15.09	16.18	13.09	13.81	13.95	14.70	15.79
	4H	14.20	14.85	15.07	15.74	16.86	13.80	14.45	14.67	15.34	16.45
	6H	14.71	15.28	15.60	16.19	17.31	14.31	14.88	15.20	15.78	16.91
	8H	14.86	15.39	15.76	16.30	17.43	14.46	14.99	15.35	15.89	17.02
	12H	14.94	15.42	15.85	16.34	17.48	14.52	15.00	15.44	15.92	17.06
8H	4H	14.40	14.93	15.30	15.84	16.97	14.05	14.58	14.94	15.48	16.61
	6H	15.03	15.47	15.95	16.42	17.55	14.67	15.11	15.59	16.06	17.19
	8H	15.25	15.64	16.18	16.58	17.73	14.88	15.27	15.81	16.21	17.36
	12H	15.38	15.72	16.31	16.65	17.86	15.00	15.35	15.94	16.28	17.48
12H	4H	14.40	14.87	15.31	15.80	16.94	14.05	14.52	14.96	15.45	16.59
	6H	15.06	15.45	15.99	16.39	17.54	14.71	15.10	15.64	16.04	17.19
	8H	15.31	15.65	16.24	16.58	17.78	14.95	15.29	15.88	16.22	17.43

END OF REPORT