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: P926128

Luminaire Tested: DFN2DIP-TR2F0-040D030US950-FLLFLL

Issue Date: 11/21/2024

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Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P926128
	REPORT IS A COMBINATION OF REPORTS P900235 AND P897145
Test Lab:	INNOVATION CENTER
Issue Date:	11/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	NEO-RAY
Catalog Number:	DFN2DIP-TR2F0-040D030US950-FLLFLL
Description:	2 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6310.7 lumens
Efficiency:	N/A
Efficacy:	109.2 lumens/watt
Spacing Criteria (0/90/45):	1.2 / 1.16 / 1.29
Luminous Opening:	Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type:	General Diffuse

Input Watts (W):	57.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.9933
Total Harmonic Distortion (THDi):	0.066
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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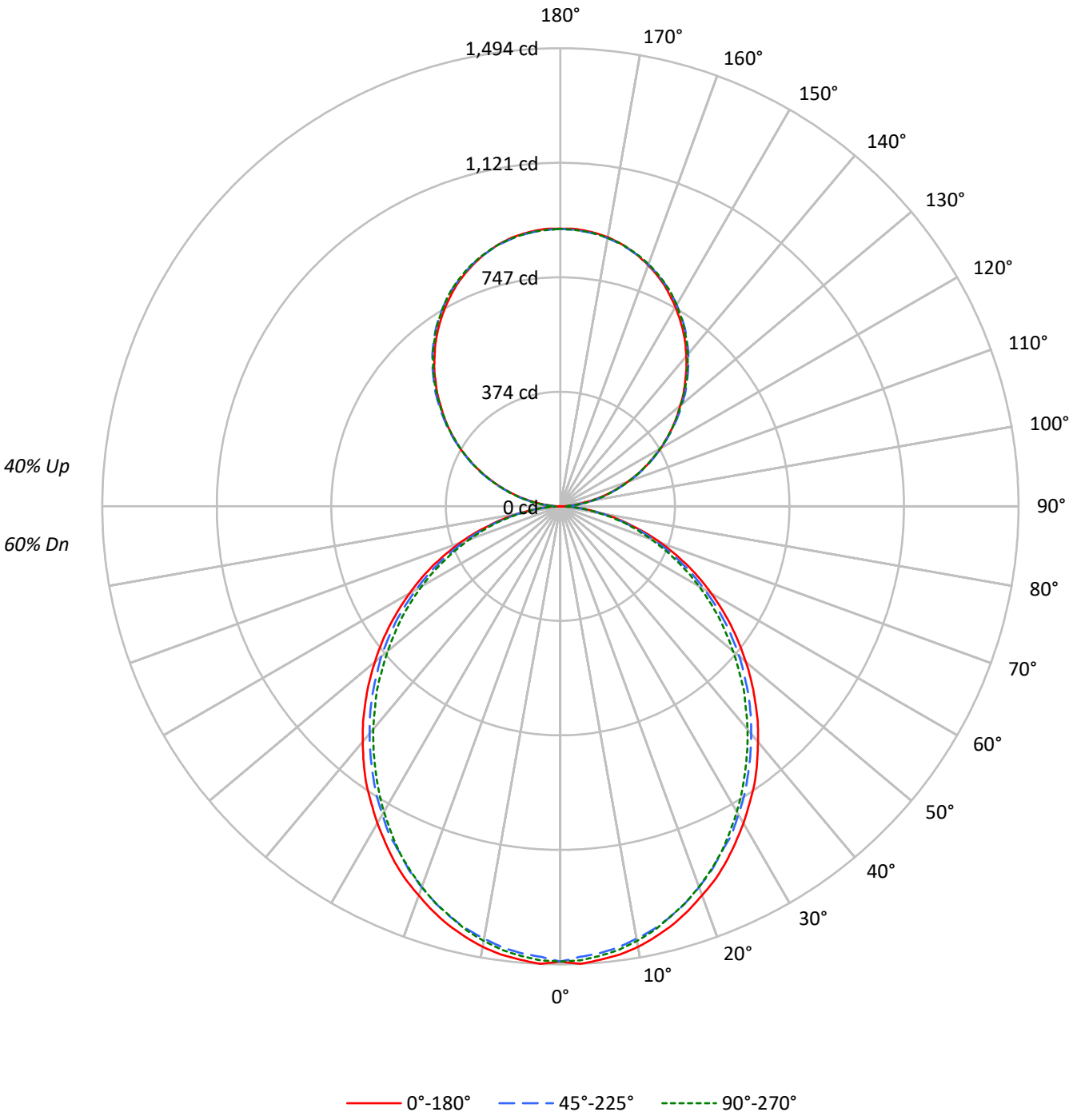
Luminous Intensity Polar Plot



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	100	96	92	88	93	89	86	83	78	75	73	67	66	64	58	56	55	50
2	91	84	77	72	85	78	73	68	68	64	61	59	56	53	51	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	43	47	42	39	40	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	33	29	26	23
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	30	52	40	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3312	3312	3312
5°	3312	3258	3282
10°	3280	3207	3232
15°	3227	3147	3157
20°	3157	3066	3080
25°	3087	2971	2992
30°	3001	2882	2882
35°	2919	2779	2766
40°	2818	2673	2656
45°	2718	2568	2542
50°	2608	2457	2411
55°	2492	2329	2289
60°	2361	2177	2149
65°	2218	2019	1985
70°	2035	1827	1806
75°	1784	1596	1634
80°	1479	1301	1321
85°	1009	820	821

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2718 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	2.2
10°-20°	393.2	6.2
20°-30°	577.9	9.2
30°-40°	671.2	10.6
40°-50°	670.3	10.6
50°-60°	584.5	9.3
60°-70°	432.1	6.8
70°-80°	244.5	3.9
80°-90°	67.1	1.1
90°-100°	56.0	0.9
100°-110°	178.0	2.8
110°-120°	304.6	4.8
120°-130°	400.5	6.3
130°-140°	449.6	7.1
140°-150°	440.9	7.0
150°-160°	369.8	5.9
160°-170°	245.3	3.9
170°-180°	85.7	1.4
0°-30°	1110.8	17.6
0°-40°	1782.0	28.2
0°-60°	3036.8	48.1
0°-90°	3780.4	59.9
90°-120°	538.5	8.5
90°-150°	1829.5	29.0
90°-180°	2530.0	40.1
0°-180°	6310.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1485	1479	1463	1475	1472	141
15°	1413	1405	1386	1392	1385	398
25°	1279	1268	1244	1246	1244	589
35°	1104	1090	1067	1058	1051	689
45°	898	888	867	851	845	693
55°	680	671	654	637	630	608
65°	458	450	436	423	416	453
75°	240	237	230	221	224	256
85°	58	57	56	51	50	65
90°	1	10	27	25	26	6
95°	40	48	49	49	48	44
105°	164	166	168	169	169	173
115°	306	310	309	308	306	302
125°	445	451	449	447	446	397
135°	575	583	585	584	582	444
145°	698	704	708	709	706	436
155°	798	800	803	807	804	367
165°	868	868	868	873	869	245
175°	904	901	900	905	900	86
180°	905	905	905	905	905	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	*1484.8*	1484.8	1484.8	1484.8	1484.8
2.5°	*1493.5*	*1486.3*	*1470.6*	*1484.8*	*1482.1*
5°	*1484.8*	1479.2	1463.4	1474.8	1472.1
7.5°	*1474.8*	1466.3	1450.6	1462.1	1459.2
10°	*1459.2*	1449.2	1432.1	1443.5	1439.2
12.5°	*1437.7*	1429.2	1412.1	1419.3	1416.3
15°	*1413.4*	1405.0	1386.4	1392.1	1385.0
17.5°	*1383.5*	1375.0	1356.4	1363.5	1356.4
20°	*1350.6*	1342.1	1322.1	1326.3	1320.8
22.5°	*1317.9*	1305.0	1286.4	1286.4	1283.5
25°	*1279.2*	1267.9	1243.6	1246.4	1243.6
27.5°	*1236.4*	1226.4	1208.0	1203.7	1196.6
30°	*1193.6*	1182.2	1160.8	1156.5	1150.8
32.5°	*1147.9*	1139.5	1116.6	1108.0	1102.2
35°	*1103.7*	1089.5	1066.6	1058.0	1050.8
37.5°	*1053.7*	1040.8	1017.9	1008.0	1000.8
40°	*1002.4*	990.8	967.9	955.2	949.5
42.5°	*952.4*	940.8	918.1	903.7	895.2
45°	*898.1*	888.2	866.6	851.1	845.2
47.5°	*845.2*	835.2	812.4	796.7	788.2
50°	*789.5*	782.4	762.4	742.4	735.2
52.5°	*735.2*	725.3	706.8	691.1	681.1
55°	*679.7*	671.0	654.0	636.8	629.7
57.5°	*623.9*	616.9	598.2	581.1	575.4
60°	*568.2*	562.6	542.6	526.9	522.6
62.5°	*514.0*	504.0	489.8	475.5	469.7
65°	*458.4*	449.7	435.5	422.6	415.6
67.5°	*401.3*	394.0	381.3	371.3	365.6
70°	*348.4*	342.7	329.8	319.8	314.2
72.5°	*294.2*	288.4	281.3	271.3	267.0
75°	*239.8*	237.1	229.8	221.3	224.2
77.5°	*191.3*	185.6	182.7	178.4	174.2
80°	*142.8*	141.3	138.4	134.2	131.4
82.5°	*97.1*	97.1	95.8	90.0	90.0
85°	*58.5*	57.1	55.7	51.3	50.0
87.5°	*25.8*	22.9	20.0	15.7	14.2
90°	*0.9*	9.8	26.7	25.1	25.9
92.5°	*16.9*	22.9	23.8	24.5	24.5
95°	*39.9*	47.5	48.8	48.8	47.5
97.5°	*66.3*	73.4	76.4	76.4	76.4
100°	*96.8*	103.1	105.3	105.3	104.6
102.5°	*129.1*	133.8	136.7	137.6	136.7
105°	*164.3*	166.5	168.1	169.4	169.4
107.5°	*199.2*	202.4	202.4	203.0	199.2
110°	*233.1*	237.5	237.5	237.5	235.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	*269.6*	274.3	273.4	271.2	269.6
115°	*305.7*	310.0	308.6	307.9	305.7
117.5°	*341.3*	347.4	343.5	341.3	339.1
120°	*377.4*	383.4	377.4	377.4	374.9
122.5°	*410.1*	417.8	413.9	411.7	410.1
125°	*444.6*	451.3	449.1	446.7	445.9
127.5°	*478.0*	486.5	483.6	480.2	478.0
130°	*509.4*	519.3	517.9	516.3	513.3
132.5°	*544.6*	552.3	552.8	549.0	546.8
135°	*575.0*	583.4	585.1	584.2	582.0
137.5°	*608.7*	615.6	617.0	616.5	613.1
140°	*638.5*	645.4	649.2	649.2	646.1
142.5°	*669.1*	675.9	678.1	679.0	675.9
145°	*698.0*	703.5	707.9	708.6	705.7
147.5°	*724.0*	730.8	734.0	735.4	732.4
150°	*750.7*	755.4	758.3	760.8	758.3
152.5°	*774.5*	779.0	782.9	785.9	782.9
155°	*798.2*	800.3	802.8	806.6	804.2
157.5°	*818.6*	820.2	821.7	827.1	823.3
160°	*836.9*	838.6	839.4	844.0	840.8
162.5°	*853.8*	853.8	854.7	859.8	856.0
165°	*868.3*	867.5	867.5	872.9	869.1
167.5°	*881.4*	878.9	878.9	884.4	880.5
170°	*891.2*	889.0	888.3	893.7	889.0
172.5°	*898.0*	895.9	895.0	900.5	895.9
175°	*903.5*	901.3	899.7	905.2	900.5
177.5°	*906.5*	904.3	902.7	907.3	902.7
180°	*905.2*	905.2	905.2	905.2	905.2

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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	12.17	13.13	13.04	14.02	15.14	11.75	12.70	12.61	13.59	14.72
	3H	13.81	14.67	14.69	15.57	16.72	13.35	14.21	14.23	15.11	16.26
	4H	14.39	15.20	15.29	16.11	17.27	13.93	14.74	14.83	15.65	16.81
	6H	14.78	15.53	15.68	16.44	17.61	14.32	15.07	15.22	15.98	17.15
	8H	14.88	15.59	15.79	16.52	17.69	14.42	15.13	15.33	16.06	17.23
	12H	14.92	15.60	15.84	16.52	17.72	14.46	15.14	15.38	16.06	17.25
4H	2H	12.63	13.45	13.53	14.35	15.51	12.29	13.11	13.20	14.01	15.17
	3H	14.48	15.16	15.39	16.10	17.27	14.10	14.78	15.01	15.71	16.88
	4H	15.18	15.80	16.10	16.73	17.93	14.79	15.41	15.71	16.34	17.53
	6H	15.68	16.21	16.62	17.17	18.37	15.28	15.82	16.22	16.77	17.97
	8H	15.82	16.32	16.76	17.27	18.48	15.42	15.92	16.36	16.87	18.08
	12H	15.89	16.34	16.84	17.30	18.52	15.48	15.93	16.44	16.90	18.12
8H	4H	15.37	15.87	16.31	16.82	18.04	15.02	15.52	15.96	16.47	17.68
	6H	15.98	16.40	16.95	17.39	18.60	15.63	16.04	16.60	17.03	18.25
	8H	16.19	16.55	17.16	17.53	18.76	15.83	16.20	16.81	17.18	18.41
	12H	16.31	16.63	17.29	17.60	18.88	15.94	16.26	16.92	17.23	18.51
12H	4H	15.36	15.81	16.32	16.78	18.00	15.02	15.47	15.98	16.44	17.65
	6H	16.01	16.37	16.98	17.35	18.58	15.67	16.03	16.64	17.01	18.24
	8H	16.24	16.56	17.21	17.53	18.81	15.89	16.21	16.87	17.19	18.46

END OF REPORT