

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: P905630

Luminaire Tested: DFN2DIP-PN2F0-040D050US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P905630
REPORT IS A COMBINATION OF REPORTS P899496 AND P896349
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-PN2F0-040D050US835-RLLFLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

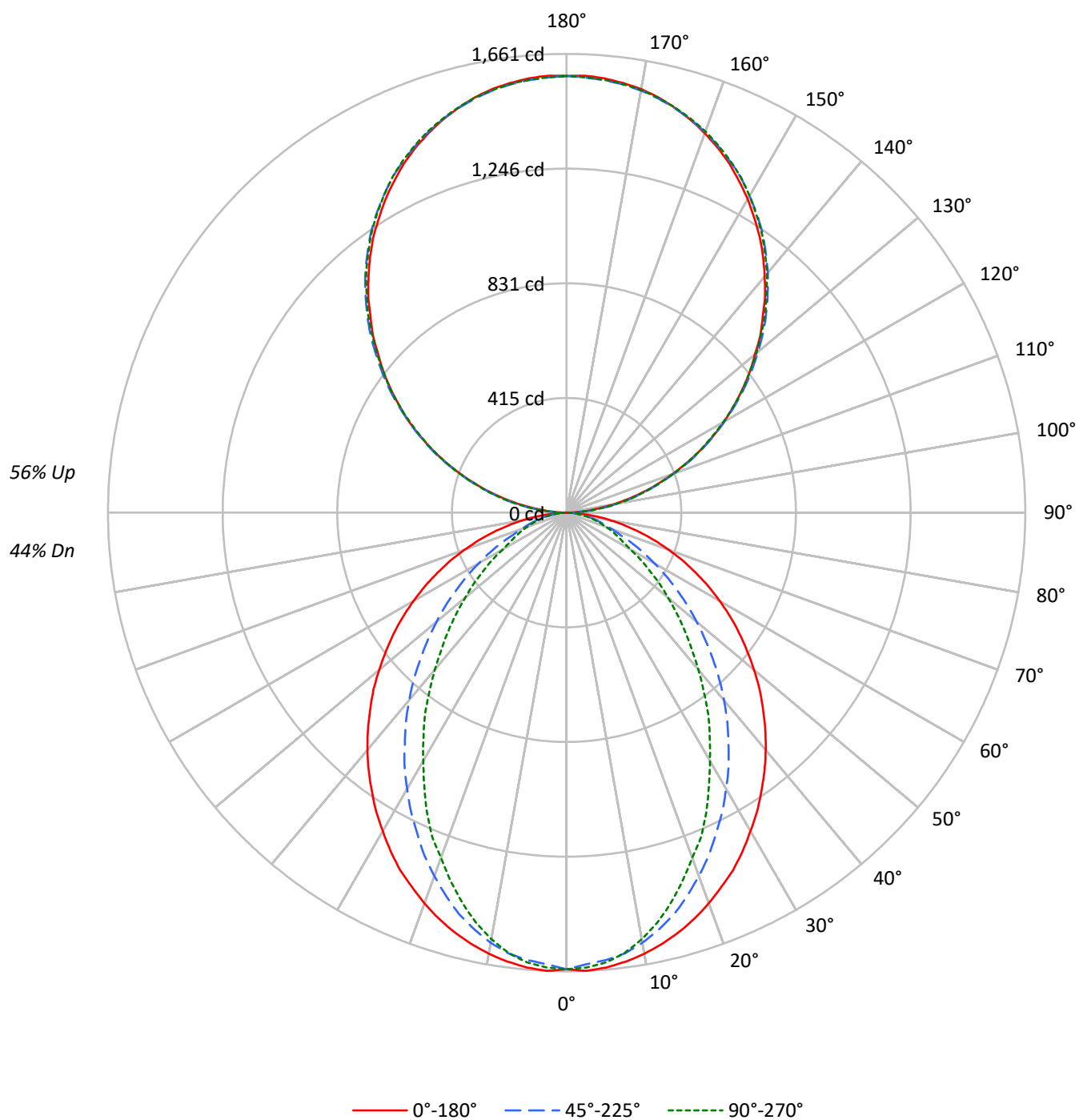
Lumens per Lamp: N/A
Luminaire Lumens: 7825.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.17' x L: 2.29' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 80.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P905630

CATALOG NUMBER: DFN2DIP-PN2F0-040D050US835-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P905630

CATALOG NUMBER: DFN2DIP-PN2F0-040D050US835-RLFL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50
1	97	93	89	86	88	85	82	79	70	68	66	57	56	54	45	44	43
2	88	81	75	71	81	75	70	65	62	59	55	51	48	46	40	38	37
3	81	72	65	59	74	66	60	55	55	51	47	45	42	39	36	34	32
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	32	30	28
5	68	57	49	43	62	53	46	41	44	39	35	37	33	30	29	27	25
6	63	51	43	38	57	47	41	35	40	35	31	33	29	26	27	24	22
7	58	46	39	33	53	43	36	31	36	31	27	30	26	23	25	22	20
8	54	42	35	30	50	39	32	28	33	28	24	28	24	21	23	20	18
9	50	39	31	26	46	36	29	25	31	25	22	26	22	19	21	18	16
10	47	35	28	24	43	33	27	22	28	23	20	24	20	17	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3581	3581	3581
5°	3581	3516	3541
10°	3539	3439	3421
15°	3485	3318	3238
20°	3415	3155	3015
25°	3343	2972	2800
30°	3248	2786	2530
35°	3155	2587	2292
40°	3060	2382	2020
45°	2950	2155	1774
50°	2836	1926	1534
55°	2717	1683	1304
60°	2578	1430	1069
65°	2419	1174	956
70°	2224	936	857
75°	1980	810	770
80°	1629	658	652
85°	1065	409	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2950 cd/sqm

TEST NUMBER: P905630

CATALOG NUMBER: DFN2DIP-PN2F0-040D050US835-RLFL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	2.0
10°-20°	425.3	5.4
20°-30°	597.2	7.6
30°-40°	650.9	8.3
40°-50°	598.3	7.6
50°-60°	469.9	6.0
60°-70°	305.8	3.9
70°-80°	157.4	2.0
80°-90°	44.7	0.6
90°-100°	97.8	1.3
100°-110°	310.9	4.0
110°-120°	532.1	6.8
120°-130°	699.7	8.9
130°-140°	785.4	10.0
140°-150°	770.2	9.8
150°-160°	646.1	8.3
160°-170°	428.5	5.5
170°-180°	149.8	1.9
0°-30°	1177.4	15.0
0°-40°	1828.4	23.4
0°-60°	2896.5	37.0
0°-90°	3404.5	43.5
90°-120°	940.8	12.0
90°-150°	3196.2	40.8
90°-180°	4421.0	56.5
0°-180°	7825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1653	1653	1653	1653	1653	
5°	1653	1646	1626	1640	1635	157
15°	1572	1556	1505	1477	1462	443
25°	1427	1379	1281	1219	1197	656
35°	1230	1154	1022	928	895	770
45°	1005	905	748	642	606	776
55°	764	648	486	396	368	683
65°	516	395	260	210	205	512
75°	275	170	120	109	108	291
85°	64	33	28	28	28	74
90°	1	17	47	44	45	8
95°	70	83	85	85	83	77
105°	287	291	294	296	296	303
115°	534	542	539	538	534	528
125°	777	788	785	780	779	694
135°	1004	1019	1022	1021	1017	776
145°	1220	1229	1237	1238	1233	762
155°	1394	1398	1402	1409	1405	642
165°	1517	1516	1516	1525	1518	428
175°	1578	1575	1572	1581	1573	150
180°	1581	1581	1581	1581	1581	

TEST NUMBER: P905630

CATALOG NUMBER: DFN2DIP-PN2F0-040D050US835-RLFL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1653.2	1653.2	1653.2	1653.2	1653.2
2.5°	1660.7	1653.2	1636.7	1651.8	1648.7
5°	1653.2	1645.7	1626.2	1639.7	1635.3
7.5°	1639.7	1630.8	1609.9	1615.7	1608.3
10°	1621.8	1611.3	1581.4	1576.8	1568.0
12.5°	1599.4	1585.9	1545.4	1536.5	1520.0
15°	1572.4	1555.9	1505.1	1476.7	1461.8
17.5°	1541.0	1517.0	1454.1	1421.3	1397.3
20°	1505.1	1475.1	1400.3	1363.0	1330.0
22.5°	1466.2	1431.8	1344.9	1294.1	1271.8
25°	1427.3	1379.4	1280.6	1219.4	1196.8
27.5°	1381.0	1330.0	1220.8	1150.5	1116.0
30°	1331.6	1274.6	1154.9	1078.7	1038.3
32.5°	1283.7	1214.8	1092.2	1002.4	964.9
35°	1229.9	1153.5	1021.9	927.6	894.6
37.5°	1177.5	1095.1	956.0	852.7	815.4
40°	1122.1	1032.4	887.2	781.0	742.1
42.5°	1065.2	969.5	818.4	707.6	670.3
45°	1005.4	905.1	748.1	641.8	605.9
47.5°	948.6	842.4	680.8	574.5	541.6
50°	885.7	779.5	614.9	511.6	480.3
52.5°	824.3	712.1	552.1	453.3	424.9
55°	764.5	647.8	486.2	396.5	368.1
57.5°	703.2	583.5	427.9	344.1	320.2
60°	640.3	520.6	366.5	290.3	266.4
62.5°	579.1	459.4	314.1	242.4	230.5
65°	516.2	394.9	260.3	209.5	204.9
67.5°	456.4	335.1	209.5	184.0	179.5
70°	393.5	276.8	173.5	158.6	152.5
72.5°	333.7	222.9	145.1	133.2	130.2
75°	275.2	170.5	119.7	109.2	107.8
77.5°	217.0	121.1	94.3	88.3	85.2
80°	163.0	86.8	71.7	65.9	65.9
82.5°	113.7	58.4	49.4	46.3	46.3
85°	64.3	32.9	28.4	28.4	28.4
87.5°	24.0	11.9	11.9	10.5	10.5
90°	1.4	17.2	46.7	43.9	45.3
92.5°	29.6	40.0	41.5	42.9	42.9
95°	69.6	83.0	85.3	85.3	83.0
97.5°	115.8	128.2	133.5	133.5	133.5
100°	169.2	180.2	184.0	184.0	182.6
102.5°	225.5	233.6	238.8	240.3	238.8
105°	287.0	290.8	293.7	296.0	296.0
107.5°	348.0	353.7	353.7	354.7	348.0
110°	407.1	414.8	414.8	414.8	410.9

TEST NUMBER: P905630

CATALOG NUMBER: DFN2DIP-PN2F0-040D050US835-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	471.0	479.1	477.7	473.9	471.0
115°	533.9	541.6	539.2	537.8	533.9
117.5°	596.4	606.9	600.2	596.4	592.6
120°	659.3	669.8	659.3	659.3	655.0
122.5°	716.5	729.9	723.2	719.4	716.5
125°	776.6	788.5	784.7	780.4	779.0
127.5°	835.2	850.0	844.8	839.0	835.2
130°	890.1	907.2	904.8	902.0	896.7
132.5°	951.6	964.9	965.9	959.2	955.4
135°	1004.5	1019.2	1022.1	1020.7	1016.9
137.5°	1063.6	1075.5	1077.9	1076.9	1071.2
140°	1115.5	1127.5	1134.1	1134.1	1128.9
142.5°	1168.9	1180.9	1184.7	1186.1	1180.9
145°	1219.5	1229.0	1236.6	1238.1	1232.8
147.5°	1264.8	1276.7	1282.4	1284.8	1279.5
150°	1311.5	1319.6	1324.8	1329.1	1324.8
152.5°	1353.0	1361.1	1367.7	1373.0	1367.7
155°	1394.4	1398.2	1402.5	1409.2	1404.9
157.5°	1430.2	1433.0	1435.4	1445.0	1438.3
160°	1462.1	1465.0	1466.4	1474.5	1468.8
162.5°	1491.7	1491.7	1493.1	1502.2	1495.5
165°	1517.0	1515.5	1515.5	1525.1	1518.4
167.5°	1539.8	1535.5	1535.5	1545.1	1538.4
170°	1557.0	1553.2	1551.8	1561.3	1553.2
172.5°	1568.9	1565.1	1563.7	1573.2	1565.1
175°	1578.5	1574.6	1571.8	1581.3	1573.2
177.5°	1583.7	1579.9	1577.0	1585.1	1577.0
180°	1581.3	1581.3	1581.3	1581.3	1581.3

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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	10.82	11.60	11.84	12.62	13.99	6.79	7.57	7.81	8.59	9.96
	3H	12.48	13.17	13.50	14.20	15.59	7.96	8.66	8.99	9.69	11.07
	4H	13.07	13.73	14.11	14.76	16.15	8.39	9.05	9.43	10.09	11.48
	6H	13.47	14.08	14.52	15.12	16.52	8.70	9.30	9.75	10.34	11.75
	8H	13.59	14.16	14.64	15.22	16.62	8.78	9.36	9.83	10.41	11.81
	12H	13.64	14.19	14.70	15.23	16.66	8.81	9.36	9.87	10.41	11.83
4H	2H	10.83	11.49	11.88	12.52	13.91	7.37	8.03	8.41	9.06	10.45
	3H	12.63	13.18	13.69	14.24	15.65	8.69	9.24	9.75	10.30	11.71
	4H	13.31	13.81	14.37	14.86	16.29	9.23	9.73	10.29	10.78	12.21
	6H	13.80	14.23	14.87	15.31	16.73	9.62	10.05	10.69	11.13	12.55
	8H	13.96	14.36	15.03	15.43	16.87	9.74	10.14	10.81	11.21	12.65
	12H	14.04	14.41	15.13	15.49	16.93	9.79	10.16	10.88	11.24	12.68
8H	4H	13.27	13.67	14.34	14.74	16.17	9.49	9.89	10.56	10.96	12.40
	6H	13.81	14.14	14.90	15.25	16.68	9.98	10.32	11.08	11.43	12.86
	8H	14.01	14.30	15.11	15.39	16.85	10.16	10.45	11.26	11.55	13.00
	12H	14.13	14.39	15.23	15.48	16.97	10.26	10.52	11.37	11.61	13.10
12H	4H	13.21	13.58	14.30	14.66	16.10	9.49	9.85	10.58	10.93	12.38
	6H	13.78	14.07	14.88	15.17	16.62	10.03	10.32	11.13	11.41	12.87
	8H	13.98	14.24	15.09	15.33	16.82	10.22	10.48	11.32	11.56	13.06

END OF REPORT