

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: P920730

Luminaire Tested: DFN2DIP-TR3F0-030D030US935-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P920730
REPORT IS A COMBINATION OF REPORTS P900272 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-030D030US935-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

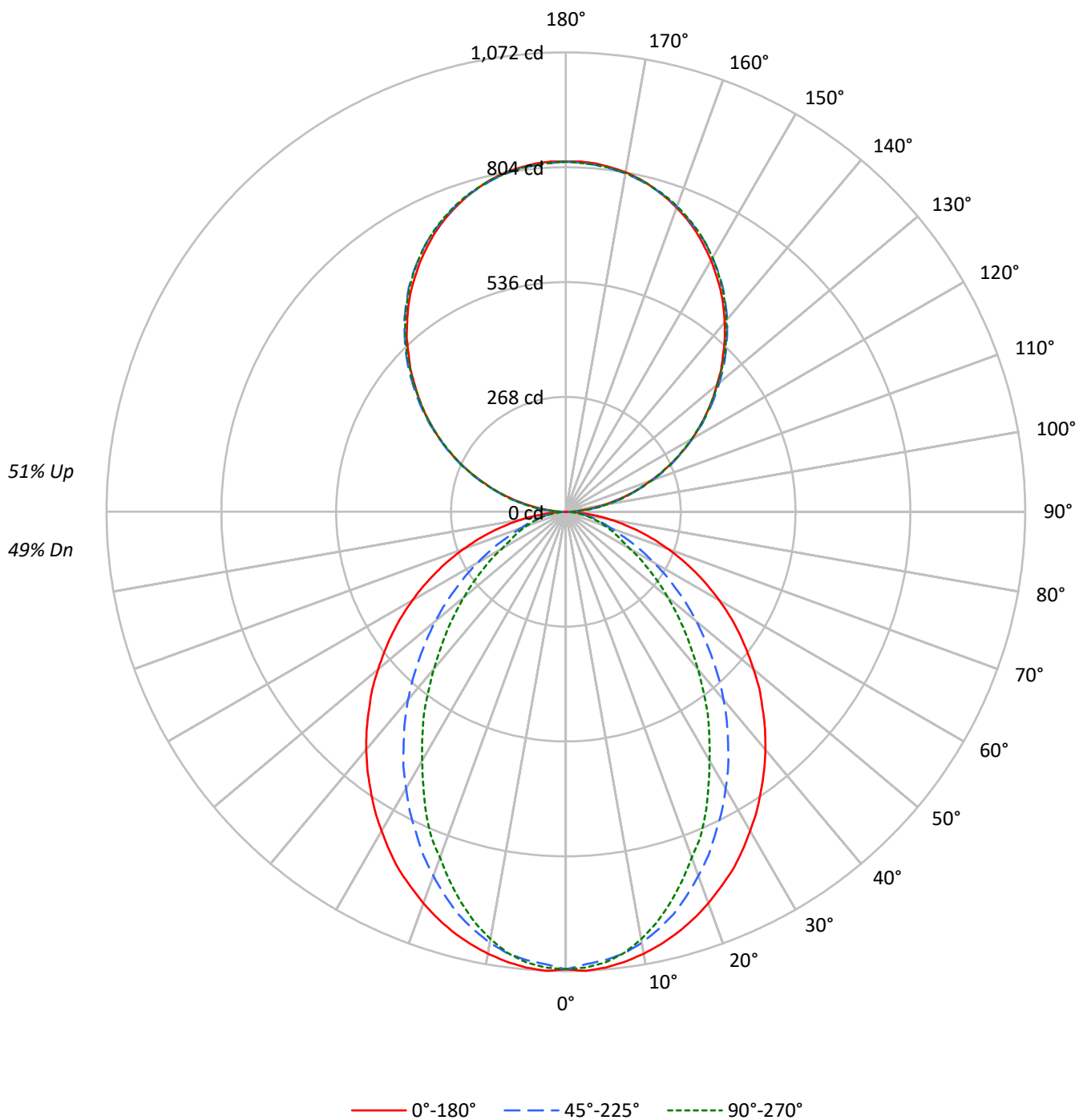
Lumens per Lamp: N/A
Luminaire Lumens: 4481.4 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 46.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P920730

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US935-RLLFLL

Luminous Intensity Polar Plot



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CATALOG NUMBER: DFN2DIP-TR3F0-030D030US935-RLLFLL

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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55
1	98	94	90	87	90	87	84	81	73	71	69	61	59	58	50	49	48
2	90	83	77	72	82	76	71	67	65	61	58	54	51	49	44	42	41
3	82	73	66	60	75	68	61	57	58	53	49	48	45	42	40	37	35
4	75	65	57	51	69	60	54	48	51	46	42	43	40	36	36	33	31
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27
6	64	52	44	39	59	49	42	37	42	36	32	35	31	28	30	26	24
7	59	47	40	34	55	44	37	32	38	33	29	32	28	25	27	24	22
8	55	43	36	30	51	40	33	29	35	29	26	30	26	23	25	22	20
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18
10	48	36	29	24	44	34	28	23	30	24	21	25	21	19	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1330	1330	1330
5°	1332	1308	1317
10°	1318	1281	1273
15°	1299	1238	1206
20°	1274	1178	1124
25°	1249	1112	1045
30°	1215	1044	945
35°	1182	971	857
40°	1148	896	756
45°	1109	812	665
50°	1069	728	576
55°	1026	638	491
60°	977	544	403
65°	920	449	362
70°	852	360	326
75°	765	315	295
80°	641	261	253
85°	436	169	185

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1109 cd/sqm

TEST NUMBER: P920730

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US935-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	2.2
10°-20°	274.7	6.1
20°-30°	385.6	8.6
30°-40°	420.3	9.4
40°-50°	386.3	8.6
50°-60°	303.4	6.8
60°-70°	197.5	4.4
70°-80°	101.7	2.3
80°-90°	28.3	0.6
90°-100°	50.6	1.1
100°-110°	160.6	3.6
110°-120°	274.9	6.1
120°-130°	361.5	8.1
130°-140°	405.7	9.1
140°-150°	397.9	8.9
150°-160°	333.8	7.4
160°-170°	221.3	4.9
170°-180°	77.4	1.7
0°-30°	760.3	17.0
0°-40°	1180.7	26.3
0°-60°	1870.4	41.7
0°-90°	2197.8	49.0
90°-120°	486.0	10.8
90°-150°	1651.1	36.8
90°-180°	2284.0	51.0
0°-180°	4481.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1068	1063	1050	1059	1056	101
15°	1015	1005	972	954	944	286
25°	922	891	827	787	773	424
35°	794	745	660	599	578	497
45°	649	584	483	414	391	501
55°	494	418	314	256	238	441
65°	333	255	168	135	132	330
75°	178	110	77	70	70	188
85°	42	21	18	18	18	48
90°	1	9	24	23	23	4
95°	36	43	44	44	43	40
105°	148	150	152	153	153	156
115°	276	280	278	278	276	273
125°	401	407	405	403	402	358
135°	519	526	528	527	525	401
145°	630	635	639	640	637	394
155°	720	722	724	728	726	332
165°	784	783	783	788	784	221
175°	816	814	812	817	813	77
180°	817	817	817	817	817	

TEST NUMBER: P920730

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US935-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1067.6	1067.6	1067.6	1067.6	1067.6
2.5°	1072.4	1067.6	1056.9	1066.6	1064.7
5°	1067.6	1062.7	1050.2	1058.9	1055.9
7.5°	1058.9	1053.1	1039.6	1043.4	1038.5
10°	1047.2	1040.5	1021.2	1018.2	1012.5
12.5°	1032.8	1024.1	998.0	992.2	981.5
15°	1015.4	1004.7	971.9	953.6	943.9
17.5°	995.1	979.6	939.0	917.8	902.3
20°	971.9	952.5	904.2	880.2	858.8
22.5°	946.8	924.5	868.5	835.7	821.2
25°	921.7	890.7	827.0	787.4	772.8
27.5°	891.7	858.8	788.3	743.0	720.7
30°	859.9	823.1	745.8	696.6	670.5
32.5°	828.9	784.5	705.3	647.3	623.1
35°	794.2	744.8	659.9	599.0	577.7
37.5°	760.3	707.1	617.3	550.6	526.6
40°	724.6	666.7	572.9	504.3	479.2
42.5°	687.9	626.1	528.5	456.9	432.8
45°	649.3	584.4	483.1	414.4	391.2
47.5°	612.5	544.0	439.6	370.9	349.7
50°	572.0	503.3	397.1	330.4	310.1
52.5°	532.3	459.9	356.5	292.7	274.4
55°	493.6	418.3	313.9	256.1	237.7
57.5°	454.1	376.8	276.4	222.2	206.7
60°	413.5	336.2	236.7	187.4	172.0
62.5°	373.9	296.6	202.9	156.5	148.9
65°	333.3	255.0	168.1	135.3	132.3
67.5°	294.7	216.4	135.3	118.8	115.9
70°	254.1	178.7	112.0	102.4	98.5
72.5°	215.4	143.9	93.7	86.0	84.0
75°	177.7	110.1	77.3	70.5	69.6
77.5°	140.1	78.2	60.9	57.0	55.0
80°	105.3	56.1	46.3	42.5	42.5
82.5°	73.4	37.7	31.9	30.0	30.0
85°	41.5	21.2	18.3	18.3	18.3
87.5°	15.5	7.7	7.7	6.8	6.8
90°	0.8	8.9	24.1	22.6	23.4
92.5°	15.2	20.7	21.4	22.1	22.1
95°	36.0	42.9	44.1	44.1	42.9
97.5°	59.8	66.2	69.0	69.0	69.0
100°	87.4	93.1	95.1	95.1	94.4
102.5°	116.5	120.7	123.4	124.2	123.4
105°	148.3	150.2	151.7	152.9	152.9
107.5°	179.8	182.7	182.7	183.2	179.8
110°	210.3	214.3	214.3	214.3	212.3



TEST NUMBER: P920730

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US935-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	243.3	247.5	246.8	244.8	243.3
115°	275.9	279.7	278.5	277.8	275.9
117.5°	308.1	313.5	310.0	308.1	306.1
120°	340.6	346.0	340.6	340.6	338.4
122.5°	370.1	377.0	373.6	371.6	370.1
125°	401.2	407.3	405.4	403.1	402.4
127.5°	431.4	439.1	436.4	433.4	431.4
130°	459.8	468.6	467.4	466.0	463.2
132.5°	491.5	498.4	498.9	495.5	493.5
135°	518.9	526.5	528.0	527.3	525.3
137.5°	549.4	555.6	556.8	556.4	553.4
140°	576.3	582.5	585.9	585.9	583.2
142.5°	603.9	610.0	612.0	612.8	610.0
145°	630.0	634.9	638.9	639.5	636.9
147.5°	653.4	659.5	662.5	663.7	661.0
150°	677.5	681.7	684.4	686.6	684.4
152.5°	699.0	703.1	706.5	709.3	706.5
155°	720.4	722.3	724.5	728.0	725.8
157.5°	738.8	740.3	741.6	746.5	743.0
160°	755.4	756.8	757.6	761.7	758.8
162.5°	770.6	770.6	771.4	776.0	772.6
165°	783.7	782.9	782.9	787.8	784.4
167.5°	795.5	793.2	793.2	798.1	794.7
170°	804.3	802.4	801.7	806.6	802.4
172.5°	810.5	808.6	807.8	812.7	808.6
175°	815.5	813.5	812.0	816.9	812.7
177.5°	818.1	816.1	814.7	818.9	814.7
180°	816.9	816.9	816.9	816.9	816.9

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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	8.00	8.82	8.97	9.80	11.09	3.97	4.79	4.94	5.77	7.06
	3H	9.66	10.40	10.65	11.39	12.70	5.15	5.89	6.14	6.88	8.19
	4H	10.26	10.96	11.26	11.95	13.27	5.60	6.30	6.60	7.29	8.61
	6H	10.68	11.32	11.68	12.32	13.65	5.91	6.55	6.92	7.55	8.88
	8H	10.80	11.41	11.81	12.42	13.75	6.00	6.61	7.02	7.63	8.95
	12H	10.86	11.44	11.87	12.45	13.80	6.04	6.62	7.06	7.63	8.98
4H	2H	8.01	8.71	9.01	9.70	11.02	4.56	5.26	5.56	6.25	7.57
	3H	9.83	10.41	10.84	11.43	12.76	5.90	6.48	6.91	7.50	8.84
	4H	10.51	11.04	11.53	12.06	13.41	6.45	6.97	7.46	7.99	9.34
	6H	11.02	11.47	12.05	12.51	13.86	6.86	7.31	7.89	8.35	9.70
	8H	11.19	11.61	12.22	12.64	14.01	6.98	7.41	8.01	8.44	9.81
	12H	11.28	11.66	12.33	12.71	14.08	7.05	7.43	8.09	8.47	9.85
8H	4H	10.48	10.90	11.51	11.93	13.30	6.72	7.14	7.75	8.18	9.54
	6H	11.03	11.38	12.09	12.46	13.82	7.23	7.58	8.28	8.65	10.02
	8H	11.25	11.55	12.31	12.61	13.99	7.42	7.72	8.48	8.78	10.17
	12H	11.38	11.65	12.44	12.70	14.13	7.53	7.80	8.60	8.85	10.28
12H	4H	10.43	10.81	11.48	11.86	13.23	6.72	7.11	7.77	8.15	9.52
	6H	11.01	11.32	12.07	12.38	13.76	7.28	7.58	8.34	8.64	10.03
	8H	11.22	11.49	12.29	12.55	13.97	7.48	7.75	8.55	8.81	10.23

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

8 of 8